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# LECTURES
# ON
# *ARCHITECTURE.*

Conſiſting of

# RULES

Founded upon
HARMONICK and ARITHMETICAL
Proportions in Building,

DESIGN'D

As an Agreeable ENTERTAINMENT for
GENTLEMEN:

AND

More particularly uſeful to all who make
ARCHITECTURE, or the POLITE
ARTS, their Study.

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Read to a SOCIETY eſtabliſh'd for the Improvement of ARTS and SCIENCES, and EXPLAIN'D, by Examples on Copper Plates; with the Proportions apply'd to Practice.

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By ROBERT MORRIS.

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The SECOND EDITION.

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Printed for R. SAYER, at the *Golden Buck*, oppoſite
*Fetter-Lane, Fleet-Street.*
MDCCLIX.

# PREFACE.

IT is about three Years and half ſince I propos'd the eſtabliſhing a *Society* for the Improvement of Knowledge in Arts and Sciences, which being conſented to by thoſe Friends to whom I communicated my Thoughts, we were ſoon ſettled into the Form of a *Society* : *Architecture* was the *favourite Branch* of my *Study*, and as a Baſis to my Deſign, I read the following *Lectures*, as you will find them *dated*.

# PREFACE.

In theſe Lectures are contain'd, the Uſe and Neceſſity of Societies, the Advantage of Learning, the Antiquity of *Architecture*, of the *Orders* in general, their Application to Uſe, a proper Choice for Situation; Arithmetick and Harmonick Proportions applied to Practice, and exemplified in Copper Plates, with neceſſary Remarks and Obſervations, to explain the Subject treated on.

It is not difficult to diſcern the ſame Tract of Thought run thro' the whole Performance, and the favourite Principle of the Harmonick Proportions ſtill preſerv'd and adher'd to in the Performance of each Scheme laid down. It is very eaſy to diſcover the Works of a Plagiary, his Stile is unconſtant and variable, his Subject inconſiſtent in its Parts, diverging into improper Channels, and loſing Sight of the Mark aim'd at in his firſt ſetting out: This is the Caſe where the Perſon has, for want of Judgment, choſe a Theme out of the Ken of his Underſtanding.

I have not Vanity enough to ſay the following Lectures conſiſt of nothing but what is entirely new: But there are ſuch Parts in it, and, indeed, the Chiefeſt, that flow'd wholly from my own private Sentiments.

Since my delivering theſe Lectures to the Printer, I have read the Critical Review of the Publick Buildings, *&c.* His Obſervations, it muſt be acknowledg'd, are juſt in ſome Places, in others more ludicrous, and ſometimes ſo remote from real Criticiſm, that a florid

Expreſſion, a rhetorical Sentence, or a partial Cenſure, muſt atone for the Deficiency of his Judgment in the Principles of Architecture.

As I preſume, the Deſign or Attempt of his Review of the Publick Buildings, is to point out the Beauties, or to inform the World of their Blemiſhes, that they might embrace the one, and endeavour to avoid the other, in the Execution of future Buildings, it would have been neceſſary to aſſign Reaſons for his Diſtaſte, and to ſhew where the Errors lay. But it is only his own Opinion, which he would force upon his Reader: And as I had made an Obſervation upon *Groſvenor-Square* before he attempted it, I propoſe to ſhew that Author all the real Defects of the triple Houſe on the North Side, which may be a Specimen for him to follow in future Criticiſms.

If the Attick Windows had been ſquare, all rang'd upon the ſame Level, and remov'd ſo far lower from the under Part of the Great-Entablature, as to make the Margent, or Diſtance, equal to thoſe of one Window from another, that a kind of Fret might have been preſerv'd through the whole Range of the Deſign, and if the Dreſs of the principal Windows of the Center Houſe, which are of Pilaſters of the Compoſite Order, were not ruſticated or block'd, and the Entablatures without Key Stones: I ſay, except thoſe little Impediments to Harmony, there is no Defect in the whole Deſign: It has a Grandeur and Proportion in the Compoſure, the Parts are majeſtick and of an ample Relievo, and the Taſte is as elegant as the moſt agreeable Deſigns of thoſe who boaſt of being exact Copiers of *Palladio* or *Inigo Jones*.

As to Situation, it was, perhaps, impoſſible to place it in the Center of that Side, the Ground not being his Property; and the ſame Architect did compoſe a regular Range for that whole Side, in which he has ſhewn a Nobleneſs of Invention, and the Spirit and Keeping of the Deſign is not unworthy of the greateſt *Britiſh* Architect; but the unpolite Taſte of ſeveral Proprietors of that Ground prevented ſo beautiful a Performance from being the Ornament of that Side of the Square.

It muſt be obſerv'd, that a regular and harmonious Deſign, plac'd among other Buildings, or independent of any, will conſequently be ſtill pleaſing; it will be in itſelf elegant, and at a proper Diſtance to view it, will always affect the judicious Eye. The intended Satire, of ſaying the Deſigner had a View of taking in ſome young Heir, is falſe Criticiſm; it is rather a Panegyrick upon his Judgment: it ſhews a Taſte in the Architect capable of pleaſing, for it is only Proportion and Beauty that can affect the Eye of the Judicious or the Ignorant, ſo as to pleaſe; it muſt therefore be a Politeneſs of Fancy in the Architect, to compoſe and blend together the Beauties of Dreſs and Decoration, and make a Deſign capable to give Satisfaction to the Beholder.

What I have here ſaid, may be a Defence of the Eaſt Side, where he cannot deny a Regularity and Elegance of Taſte, but yet his Talent of Satire will be predominant. Had the Architect expanded the Pediment of that Houſe in the Center of the Line to a Proportion of the whole Range, I ſhould be glad to know why, and what Part of the Whole it muſt have neceſſarily aſſign'd to it? The Middle Houſe breaks forwards, is of another Species than thoſe adjoining, then conſequently is independant of any Proportions belonging to them: It is a Deſign of itſelf, and not ſuppos'd to repreſent the Range as one Houſe, only to preſerve a Regularity in the Diſpoſition of the ſeveral Buildings which compoſe the Line.

But he may farther obſerve, that the Windows of the two extream Houſes and the Center, are not of the ſame Magnitude or Level with the reſt, ſo that the Floors cannot be ſuppos'd to range on a horizontal Line with each other, and conſequently the Intent of the Deſign was to ſuppoſe each Houſe ſeparate and independant of another; and as the Dreſs and Ornaments vary, and have not an Affinity, they cannot be condemnable, the Deſign being only to ſhew how far the ſhifting and changing of different Moduſes and Proportions, when regularly diſpos'd, will affect the Eye. In ſhort, to diſlike every thing we ſee, ſeems to ſavour of Ill-nature and Self-opinion, which are Imperfections in our Conduct; and ſuch little Blemiſhes as are unpardonable as an over Fondneſs of Novelty, or an Affectation to Praiſe.

There is one Thing, however, which deſerves our Notice and Applauſe, and that is, that the Author of the Critical Review has the Happineſs of firſt attempting to refine the Taſte of our Modern Architects, by ſhewing them Examples of publick Deſigns which have been eſteem'd the moſt noble and regular Productions of the preſent Age, as well as preceding ones—And if theſe Lectures ſhould, in any Meaſure, contribute to the Advancement of improving the Genius of young Students in Architecture, I may at leaſt claim the ſecond Place, ſince I have laid down Rules whereby we may diſtinguiſh what is Proportion and true Harmony, and have apply'd thoſe Rules to Practice by ſundry Examples, which may be ſaid to be the firſt Attempt in which the *Beau Ideal* has been publickly explain'd.

Since I have mentioned the *Beau Ideal*, which was wrote by *Hermanſon Ten Kate* in *French*, and tranſlated by M. *Le Blon*, *Anno* 1732, I muſt acknowledge the firſt Hint I receiv'd of the Harmonick Proportions, came from that ingenious Gentleman. In the Preface to the *Beau Ideal*, he mentions the *Grecian* Analogy, and to whom the Secret was communicated; but it is to be wiſh'd, ſince *Ten Kate*'s Relations have not publiſh'd it, that M. *Le Blon* would oblige the World with ſo valuable a Piece, by making ſuch uſeful Remarks which he can ſo well apply to Architecture as well as Painting; in which the whole Myſtery of Proportion would be unravelled, and a Secret preſerv'd ſo many Ages, might by him be made publick, for the univerſal Good of Mankind, and the perfecting of Arts and Sciences, ſo far as to have every Branch of them perform'd by unerring Rules; a Secret which was by the Antients found out, and but by a few Moderns known and practis'd.

If the Reader can receive Benefit or Pleaſure in the Peruſal of theſe Lectures, I have ſatisfy'd myſelf in what I at firſt propos'd in publiſhing them, which is a Deſire to be inſtrumental to the Improvement of Arts and Sciences, and ſo employing my Time, that no Part of it may be ſaid to be uſeleſs.

Man is naturally deſign'd for a Social Being, and made for noble or uſeful Purpoſes in the Creation;

and if it is not in his Power to improve others in Knowledge, it is an incumbent Duty in him to endeavour to refine his own Underſtanding, whereby he may be ſaid to anſwer the End of his Exiſtence, in ſome Meaſure, and in which Senſe I wiſh to be underſtood. Now I ſubſcribe myſelf,

*Your humble Servant,*

R. MORRIS.

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# LECTURES ON ARCHITECTURE.

## LECTURE I.

GENTLEMEN,

IT is with Pleaſure I ſee ſo many of you met here with an unanimous Conſent to propagate Knowledge, without ſordid Views of Gain, or any biaſs'd Intereſt; and this mutual communicating of ſuch uſeful Branches of Learning to each other, will render this a Society which even Envy itſelf can no way diſſolve: And as you have done *me* the *Honour* to chuſe me your *Preſident*, I ſhall endeavour to diſcharge that Truſt with the utmoſt Aſſiduity and Care; communicating to you ſuch Parts of ARCHITECTURE which have not been fully explain'd, or tranſmitted to us, by thoſe who have treated on that Subject, I ſhall be as conciſe in my Language as the Subject will permit, endeavouring to ſay nothing but what I think will be Neceſſary; ſtill aiming at the Deſign for which this Society is propos'd to be inſtituted.

As we are now forming ourſelves into a kind of little Republick, for the mutual Aſſiſtance of each other, I ſhall in this Lecture ſhew you the abſolute Neceſſity and Advantages of *Societies* in general, as they relate to the publick or private Welfare of the Individuals; both in reſpect to the Preſervation of Rights and Properties, and Improvement of the Intellects of the Mind.

Man is a Being, by his very Make and Conſtitution, incapable of ſubſiſting alone, more things being wanting to ſupport him, than it is poſſible he can provide for himſelf. Food and Raiment are abſolutely requiſite, and if he alone were to provide them for himſelf in time of Health or Youth, and live upon ſuch Fruits which the Earth ſpontaneouſly produceth, or that Roots and Herbs were capable of continuing Life in that Health and Vigour of Age; yet which way muſt he be provided for when he comes to the Verge of Old Age? Or ſuppoſe Sickneſs ſhould ſeize him, and he could not be able to ſtir from his Cave or Retirement, how would Nature languiſh, and what Anxieties would he have in that melancholy Condition?

But ſuppoſe Nature prompted him to ſeek only the Help of the other Sex, yet by that Means the Wants would undoubtedly encreaſe: Nature would require ſomething more than Raiment and Food; the Inſtinct of propagating the Species would commence, and then more Relief, and the greater neceſſity of *Society* will be requir'd.

If it were poſſible to overcome theſe Inconveniencies, and that the little Family was grown up to Maturity, capable of providing for themſelves what was neceſſary to ſuſtain Life, by cultivating the Ground near them, for the produce of Corn, or Plants and Vegetables, and Food for Cattle, which are neceſſary for conveying the Fruits of the Earth, ploughing, *&c.* I ſay, ſuppoſe theſe Difficulties ſurmounted, yet in time they would form themſelves naturally into a kind of *Society* : It would be almoſt impoſſible, but ſome amongſt them would be more lazy or covetous than the reſt ; and the more induſtrous part of the Family would be for fencing and ſecuring his Property, which by his Labour he had acquir'd : Then Traffick would be neceſſary, in exchanging ſuch Things which they abounded in moſt, for ſuch they ſtood in more need of.

Besides, this Gardening, this Agriculture, *&c.* muſt ſuppoſe Trades to ſupply Tools neceſſary for the Performance of the ſeveral Parts ; theſe could not be done without Arts and Sciences, or at leaſt as much as is requiſite to inſtruct them in the Nature and Qualities of Metals, Wood, Stones, *&c.* to make and provide for the Purpoſes requir'd; and in this Men would find ſo much of their Time ſpent, that little would remain to the manuring of thoſe Plots which produc'd their Food; and even the Care of that would take off much of the Improvement which it is poſſible he might make in the Progreſs of the *Art* which he moſtly inclin'd to follow.

It may be farther obſerv'd, that as the Increaſe of the Families would occaſion the little Plots they poſſeſs'd to be enlarg'd or multiply'd, by degrees they would find themſelves under many Difficulties; and there would ſoon be a claſhing of Intereſts, in which Diſputes and Quarrels would naturally follow: Many things would likewiſe occaſion Envy, according to the different Intereſts of the Individuals; and likewiſe ſome Men are naturally troubleſome, more rapacious, and ungovernable than others; ſome thieviſh, vicious, *&c.* who would continually be encroaching upon the Properties of his Neighbour; and the Ambition and Covetouſneſs of others might prompt them, if they had any Advantage, to make themſelves greater or ſtronger, by taking away the Properties of others, and by repeated Inſtances of their Tyranny, Men would find themſelves, under a Neceſſity of aſſociating themſelves, for the better guarding and ſecuring their ſeveral Plots, &c. which by their Induſtry, or Patrimony, they might have acquir'd,

In Time, Neceſſity would induce Families to friendly Engagements, for Comfort and Defence; and as the Reaſon of it increas'd by Ties of Friendſhip, or Blood, or thoſe ſtronger Motives of Self-preſervation, People would mix and unite; the Weak and Innocent would be glad to place themſelves under the Protection of the more Able, and naturally giving Way for them to have the Pre-eminence, the ſeveral Sorts would ſettle in time in their proper Places, according to their ſeveral Capacities, with reſpect to the Common Concern; from all which ſome Form of Society muſt ſpring; Mankind could not otherwiſe ſubſiſt.

A Society thus form'd, for the common Good and Welfare of the People aſſociated, muſt naturally frame ſome Rules, or Laws, by which they agree to be govern'd; for in ſuch an irregular Multitude, where the Caprice, or Judgment, or Humour of every private Perſon is to be obſerved, there would be a Jargon of Inconſiſtencies, and each opinion would interfere with one another, and from ſuch an undigeſted Chaos of diſſenting Parts, muſt ſpring Confuſion, and would ſoon damnify and deſtroy each other, ſpringing from the ſeveral Turns of their Minds, from their Education, way of Living, and other Circumſtances. We muſt ſuppoſe thoſe Laws to be under a Subordination of Powers, to execute them for the Intereſt of the Individuals: Some Government muſt ariſe in the forming thoſe Laws, and in all (THOSE) whoſe Fortune or Knowledge was predominant, would naturally ſubſide.

MEN being thus led from their Caves and Retirements by Neceſſity to aſſociate together, for the better accommodating themſelves with the Conveniencies of Life, when the Wants of increaſing Families ſet them to the Exerciſe of their reaſonable Faculties; for the Attainment of Knowledge and Support, their Ideas muſt be conſequently various, and lead them to various ways of Thinking, according to the ſeveral Paſſions, Inclinations, or Opportunities which Nature or Fortune afforded them; ſome applied to Tillage, ſome to Handicraft Employments, others to Mathematical, ſuch as Buildings, *&c.* as the ſeveral Wants and Neceſſities of the Community requir'd.

As none can deny the Neceſſity and Advantage of Society, ſo it muſt be equally allow'd, ſuch Societies could not well ſubſiſt, WITHOUT thoſe *uſeful* and *convenient Buildings* which keep in juſt Oeconomy and Order, every Man's peculiar Property. Beſides, Cold and Heat in their Extreams, could not well be endur'd under the bare Canopy of Heaven; nor could ſuch Societies be capable to ſecure themſelves from the Inſults of Enemies, the Injuries of the extream Seaſons, the Pillage of Thieves and Robbers, which would frequently attack them, if they were not ſecur'd by a Defence, wherein they muſt manifeſtly break through all Reſtrictions of Laws, in attempting to deprive them of their Rights or Repoſe.

GENTLEMEN, SOCIETIES thus *modell'd* and *regulated*, under the Protection of uſeful Laws, even thoſe Laws themſelves, or Form of Government, abſolutely require uſeful and convenient Buildings to be erected; for as thoſe Laws are made by the Direction and Management of Perſons ſuperior in *Learning*, *Wiſdom*, or *Quality*, to the Bulk of the Society, they muſt have more ample Poſſeſſions to diſtinguiſh them from the inferior Part of the Species, to create an awful Reſpect in them; and in ſuch Buildings, convenient Apartments will be wanting, to conſult the Benefit and Advantages of the Society, for the Reception of Attendants, *&c.* And as in all ſuch Caſes, great will be the Wants, ſo much Judgment will be requir'd to form a juſt Diſpoſition of Materials, to make an uſeful and commodious Building.

IF the End of Societies thus conſiſts, or rather could not be kept together, in juſt Oeconomy and Order, unleſs ſecur'd and provided for in Building; if we could not be certain of our Rights, but continually attack'd by the Inſults of

Enemies, the Injuries of Weather, the Storms and Tempeſts of extream Seaſons, the Rapine and Pillage of Thieves, &c. ſo it is abſolutely convenient that ſuch Societies ſhould, as near as poſſible, aſſemble together for the Advantage of Commerce and Converſation. —— Man would be but a dull and melancholy Being, if alone; his Wants would daily increaſe, which are now reliev'd, according to the ſeveral ways in which his Neceſſities conſiſt, and correſpondent to his ſeveral Deſires; he is now furniſh'd in *Cities* and *Towns*, which could not be accommodated, were Mankind to ſeparate from Society, and whoſe Habitations were ſituated as every one's Fancy led.

I COULD have made uſe of many reaſonable Arguments to prove the Neceſſity of Buildings in general, and the Knowledge which every *Individual* of a Society ought to have of this Science; for his own *private Uſe* and *Intereſts*, for the better ſecuring their Properties to themſelves and Poſterity; but as a Digreſſion of this kind would lead me from the Deſign I propos'd by this Lecture, I ſhall only ſay, that a Knowledge of Building may, in ſome Meaſure, be uſeful to Mankind through all the Oeconomy of Life.

THE Shell, the Cortex, of the Man, thus provided for, let me point out the Advantage of Society in the Improvement of his Intellects, the Mind; in which the Benefit is more conſpicuous, more extenſive, and neceſſary: For by an Improvement of the Intellectual Faculties, Laws were firſt diſtributed, *Arts* and *Sciences* were improv'd, and all thoſe extended Progreſſes made in Aſtronomy, Geography, Navigation, Painting, Muſick, *Architecture*, *&c.* are owing to the Aſſociation of Men of the ſame Genius and Capacity, from Men of the ſame Turns of Mind, of the ſame communicative Temper, whoſe End of Study was the publick and univerſal Good of the *Society*.

WE may ſuppoſe in the Infancy of all Arts, they were crude and indigeſted, and, perhaps, found out by Accidents. The Search after one Branch of Literature, might produce the Diſcovery of ſomething of more Moment, or foreign to that which was enquir'd after: But then the cultivating, the improving and refining thoſe Arts, are owing to Society. Men in a State of Nature, without Books or Inſtructions in any *Science*, might, perhaps, be their whole Life in endeavouring to prove, that the Square of the Hypotheneuſe of a Right angled Triangle, is equal to the Square of the Sides added together : And if Men had not communicated, in Society, or by Writing ſuch Knowledge which they had acquir'd, we ſhould ſtill be ſetting out in dark Uncertainties, and the Reſidue of our Time might be employ'd in ſolving ſuch Things which now appear familiar and demonſtrative to every common Underſtanding. Thoſe things which now are eaſy to be underſtood, if we had not been taught, but by mere Nature were forc'd to ſeek, would appear abſtruſe and difficult, and the Search after it might require an uncommon Aſſiduity, and, perhaps, when our ſtricteſt Application had been made, much Time employ'd, and weary'd ourſelves in the Purſuit of it, we might have gain'd juſt as much Knowledge as we had at our firſt ſetting out.

All Countries and Ages of the World have experienc'd the Advantage of this one important Truth, That *Society* is the *Baſis* of all Knowledge, the Spring and Source of *Arts* and *Sciences*, which have been propagated, improv'd, and handed down to us by ſucceeding Ages. *Greece* and *Egypt* had their publick Schools, which taught the fine Principles of Philoſophy: *Pythagoras*, *Plato*, and others, laid the Foundations of them; and *Seneca*, *Cicero*, and the *Roman* Philoſophers, built their Studies upon them. Later Times have produc'd innumerable Inſtances of the Succeſs and Progreſs of Learning in the ſeveral Seminaries of Literature. The *Royal Academy* at *Paris*, the *Royal Society* of *London*, which by the Encouragement of Princely Favour have carried it to its moſt extended Length.

The Univerſities of *Great-Britain*, of *Holland*, *Germany*, *France*, &c. have all produc'd great and noble Geniuſes. Sir *Iſaac Newton*, Mr. *Leibnitz*, Mr. *Whiſton*, Mr. *Boyle*, and infinite Numbers of this preſent Age, whoſe extenſive Knowledge has inform'd Mankind in many difficult and abſtruſe Points, who have led Men to Truth, and are Patterns to future Ages; owe the Seeds of their Learning to ſuch Education which they receiv'd from publick Schools and Societies to which they belong'd.

THERE is undoubtedly a ſympathizing and attractive Principle in the Souls of the ſame Geniuſes: Men whoſe Ideas are nearly alike, are biaſs'd by ſome hidden Secret in Nature to aſſociate with each other. A philoſophick Mind would be illy entertain'd with a Deſcription of a Bear-baiting; and a Porter, or a Carman, would be little edify'd by a Lecture on Aſtronomy or Phyſicks; unleſs by Nature they had ſuch internal Ideas capable of retaining or receiving an Impreſſion from it: And you may ſee how ſuch Men generally herd together, and are, perhaps, diverted as much with aſſociating with each other, as the Philoſopher, the Mathematician, the Architect, can be with Men whoſe Geniuſes ſquare and tally with theirs.

FROM hence it muſt be inferr'd, that this Society conſiſteth of Men of the ſame Turn of Thought. There muſt be an Affinity in the Ideas, becauſe no Self-intereſted Views, I think, can ariſe from our preſent Aſſociation; unleſs it be the one common Concern, the Improvement of each other in uſeful Knowledge. The Baſis of it is on a firm Foundation, a friendly and amicable Communication of Thoughts without Reſerve: And as I have had the Pleaſure of propoſing it, ſeconded by your ready joining with me in my Opinion of its Uſefulneſs, I ſhall never be wanting to ſhew you how much I am obliged to eſteem you for it, and for your favourable and ready Acceptance of the Offer I made in reading ſome Lectures on the Principles of Architecture.

I HAVE propoſed to divide them into ſuch Claſſes that they ſhall be eaſily collected together; and when I have compleated the general Proportions, *&c.* with your Approbation, I intend to publiſh them, for the Service of ſuch whoſe Genius leads them to the Study of Architecture, or ſuch Branches which have an Affinity to that Science; and I ſhall interweave ſuch Remarks with it, as ſhall make it an entertaining Amuſement to you in your more private Retirements.

I HAVE but one thing more to add at preſent, that is, if any of this Society thinks it an Advantage, that they would impartially remark the little Failures which may poſſibly happen in my Diſcourſe, and point out in what Places I am deficient, that I may rectify and endeavour to amend, or vindicate ſuch Overſights, as they may appear by the different Lights in which they are view'd; and likewiſe join with me in ardently wiſhing an univerſal Succeſs and Encouragement to the Progreſs of *Arts* and *Sciences*, and a kind Reception from thoſe capable of ſupporting and encouraging ſuch who are Profeſſors of them; which will ſatisfy the Wiſhes of,

Gentlemen,

*Your Humble Servant.*

Read to the Society *October* 22, 1730.

## LECTURE II.

GENTLEMEN,

AT the firſt Meeting of this Society, I endeavour'd to ſhew you the abſolute Neceſſity and Advantage of Societies in general, as they relate to the publick or private Welfare of the Individuals, both in reſpect to the Preſervation of Rights and Properties, a Defence from Inſults of Enemies, *&c.* and as it related to the Improvement of the Intellects of the Mind. But as Time would not permit to ſhew you the Neceſſity and Uſefulneſs of Learning, and the Obligations we lie under to endeavour to cultivate and improve the Natural Genius, as far as Opportunity or Abilities will permit; I ſhall make it now the Subject of my Diſcourſe.

LEARNING, in all its Branches, may properly be ſaid to diſtinguiſh us from one another, as well as from the reſt of the Animal Creation, more diſtinctly than Speech. Birds acquire the Faculty of Speaking, but it is for the moſt Part miſplac'd; it is only the retaining of ſuch Words and Accents, which they have by frequent Repetition learn'd, but not knowing how to apply; like an Engine performing its Rotation, but inſenſible of its own Uſe.

As to Learning in general, I ſhall at preſent confine it to three great Branches, that is, Natural, Acquir'd, and Superficial; and, as far as they appear uſeful to my preſent Intention, I ſhall define in their Turns.

NATURAL Knowledge, or what may be call'd a Natural Genius, are Seeds of Learning ſown in the Mind at our firſt Formation in the Womb. Mr. *Locke* terms them Innate Ideas, ſuch which Nature has implanted in us. Though ſome diſpute, at the Conception of ſome new Idea, whether that Idea be not eternally in the Mind, though our Faculty of diſtinguiſhing it has been dormant. But as this Speculation is too curious, and foreign to my Deſign, I ſhall obſerve, as to the Natural Genius, that many lively Inſtances of it have appear'd in the Hiſtory of all Ages. The Man in whom the Seeds of Knowledge are ſown, in ſpite of all the Obſtacles of Fortune, will be ſtill the ſame; the Ideas which Nature originally ſtamps on the Mind cannot be worn out. Poverty, Obſcurity, want of Education, want of Opportunities of Improvement by Inſtruction, Books, Societies, *&c.* I ſay, in ſpite of all theſe Impediments, the bright Ideas will ſhine, they will appear beautiful through all the little Clouds of Fortune, and, like the Sun on the Surface of the Water, they will reflect their benevolent Beams on the Mind of thoſe capable of receiving them. How unhappy is the Fate of that Man, whom Nature, in ſpite of all Obſtructions, has ſupplied with a fine Genius, and yet wants the nice Correction and Care of *Art* to cultivate and improve, to draw by degrees from the Errors of ill-digeſted Opinions imbib'd in Minority, perhaps through the Ignorance of thoſe under whoſe Tuition he was plac'd, and by ſetting out in an improper Path, renders him for ever incapable of making any great Progreſs in any Art, without by ſome ſkilful Mind he is inſtructed in a more perfect Way, and taught the firſt Principles by which the Knowledge of it is to be attain'd.

Acquir'd Knowledge flows from the improving and refining the Natural Genius. The Seeds of Learning, when ſown firſt, are a minute Embryo; but by proper Methods made uſe of in the cultivating of them, they gradually arrive to Maturity. They muſt have ſuitable Principles inſtill'd, ſuch which have an Affinity to the Nature of the Genius which is to be improv'd. Thoſe Principles take Root, dilate and ſpread themſelves ſlowly into Form, which, like a young Fruit-Tree, by pruning and regularly diſpoſing, keeps from ſhooting into ſuperfluous Branches. As Thorns do not produce Thiſtles, ſo it is impoſſible for the Man who has by Nature the Seeds of the Mathematicks born with him, to be otherwiſe; and the great Painter, the great Architect, the fine Geniuſes, are ſo by Nature as well as Art; and I do not doubt, but there are many great Men now buried in Oblivion, who, if they had the Happineſs of Education, and the Fortune of Encouragement, might become

come equal to the Great Sir *Iſaac Newton* in Philoſophy, to *Raphael* in Painting, to *Palladio*, or *Inigo Jones*, in Architecture.

Superficial Learning is the Shell, the Excreſcencies of both: It is a gay, gaudy Outſide, without Value; a Multiplicity of Ideas, without Order; a Shadow only, which the Poſſeſſor graſps at, imagining it a Subſtance. Mr. *Pope* has very juſtly deſcrib'd the Character of ſuch a one in his Eſſay on Criticiſm, where he ſays,

*The bookful Blockhead, ignorantly read,*
*With Loads of learned Lumber in his Head,* &c.

And in another Part of the ſame Eſſay juſtly concludes,

*One Science only, will one Genius fit,*
*So vaſt is Art, ſo narrow human Wit.*

Such a one who has only the ſuperficial Learning, may be eaſily known by his dwelling upon the Surface of Controverſy, or Arts, not daring to ſink into the Principles or Spring of things, or not having Abilities; they are generally ſuch, whom Education has been illy applied to, not having a Genius to receive it.

I HAVE thus far ventur'd to give you my Opinion of natural, acquir'd, and ſuperficial Learning; I propoſe now to ſhew you the Uſes of it, as far as it relates to Mankind in general, and Societies in particular.

LEARNING in general, is ſubſervient to all, in all the Stages and Stations of Life: Our walking, ſitting, lying down, riſing, *&c.* are perform'd by Mechanick Powers; and though every one cannot diſcern it, or if it is not conceiv'd by the unthinking Part of Mankind, yet every Mathematician can demonſtrate it: Every Action is perform'd by the Laws of Mechaniſm; the Motion and ſudden Velocity of our Bodies, are the Effects of a Mathematical Power, and the Knowledge or Contemplation of it, elevates us a Degree above the reſt of our Species, and diſtinguiſhes us in a more eminent Manner from Brutes.

IT is neceſſary for the Direction of Affairs in Societies, in making Laws, diſtributing Juſtice, *&c.* It is neceſſary in

Trade, Traffick, and Commerce; in diſcerning the Motion of the Heavenly Bodies; in Weights, Meaſures, Travel; in ſhort, in every Thing which concerns Societies to be acquainted with.

With Reaſon, and Wiſdom, Men firſt aſſociated together, and form'd themſelves into Societies; and by it they firſt fram'd and modell'd the Laws by which they propos'd to be govern'd: And without Knowledge in Navigation, Traffick and Commerce with diſtant Countries could not be had; nor could we judge of, or deſcribe the Motion or Diſtance of the Planets, or the Time of their Revolution; by Geometry, Weights, Meaſures, and the Power of Bodies, are known; and indeed we find one Branch of Learning or another, uſeful in the whole Oeconomy of Human Nature.

Besides all this, the Pleaſures which the thinking Mind takes, in a Purſuit after Knowledge, are inexpreſſible. The *Aſtronomer* can ſoar from one Planet to another, and from one Region to another, till the Mind is loſt in infinite Space; the *Geographer* can travel from one Country to another, through various Climates, over Sea and Land, and encompaſs the whole Earth in his Imagination, and yet be only retir'd to his Cloſet, or contemplating in the Field; the *Painter* can ſee Groupes of Figures and lively Landſkips, ſome ſhocking Precipice, or ſilent Glade, to divert his Ideas; the *Architect* raiſes in his Idea, Numbers of pleaſing Structures, beautiful and proportion'd, with a regular Symmetry and a juſt Exactneſs; the *Poet* repreſents to himſelf beautiful Hills and Lawns, pleaſing Vales and circling Rivulets, the purling Streams gliding through ſome gloomy Shade, the *Harmony* of *Numbers* and *Nature.*

THE *Mechanick* ideally ſees Multitudes of various Machines for Conveyance of Timber, Stone, Water *&c.* all perfect and pleaſing to his Imagination: The *Mathematician* has his Globes, Priſms, Quadrants, Triangles, *&c.* his Lines generated by the Parabola, Hyperbola, the Cathenarian, and others. All theſe, by a little Expanſion of the Mind, are ſeen as natural as the *Statuary*, who ideally views in a Block of Marble a beautiful Statue, which only requires the Care and Skill of his nice Hand, to take away the groſs Particles of Matter which encloſe it, whereby others may view it with equal Pleaſure as himſelf.

LEARNING is a Topick which leads us from one Labyrinth of Pleaſure to another; it is as extenſive as the Univerſe; it conſiſteth of infinite Diviſions, which diſperſe themſelves into innumerable Branches; and if we trace it from one Chain to another, it never loſes its Luſtre; its Beauties are always apparent, and whatever ſhape you view it in, it ſtill charms you: It is a Jewel of ineſtimable Value, and he who poſſeſſeth it enjoys every Thing deſirable. The Goods of Fortune, by Multitude of Caſualties, periſh, and are deſtroyed: Earthquakes, Inundations and Tempeſts, impoveriſh and ruin many Countries; but no Misfortunes can ſhock the Mind of the Philoſopher: In Proſperity or Adverſity, he is the ſame: His Wiſdom, by making Excurſions into the Channels of Fortune, makes every Stage of Life equal. Knowledge is acquir'd by Study and Aſſiduity, and by cultivating thoſe Natural Faculties which are planted in us.

We ſhould endeavour to diſcover which way Nature has directed the Channel of our Genius. If to the Mathematicks ſuch Branches of Learning which lead to thoſe Arts, ſhould be carefully learnt, and not ſtop the Current of that *Rivulet* by throwing in Lumber of Law, Hiſtory, *&c.* which are contrary to Nature's Deſign. Nor muſt he who deſigns to be an Architect, load his Mind with Politicks ; he will find Matter enough in the ſeveral Branches of that alone, to employ his whole Study to become Maſter of : No Art is ſo narrow and confin'd, but it will take up much Time to be acquainted with ; and it is better to know one Thing perfect, than ſuperficially to know many. There are many Branches of Learning in every Art, and thoſe Paths which lead to them ſhould be carefully trod : Circumſpection and Diligence are requir'd to compleat the Performance, and a cloſe Application ſhould be obſerv'd in the Purſuit of our Studies.

Architecture is certainly not only a pleaſing, but extenſive Science ; for by varying and changing the Modus, there will always ſpring new Ideas, new Scenes, for the Imagination to work upon; the Fancy of the Deſigner may be always entertained, and the different Branches of Architecture will furniſh him with ſomething of an *Amuſement*, which gratifies the Eye as well as the Underſtanding.

IT will be neceſſary for the *Architect* to know as much of *Geometry*, as will enable him to delineate regular or irregular Plans, *&c.* to furniſh him with Reaſons for the Capacity of ſupporting Weights, which will often require Geometrical Conſtructions to explain; to deſcribe the external Part of a Fabrick by Perſpective Elevations, or the internal by Sections, *&c.* all which are founded on the Principles of Geometry.

THE *Architect* ſhould be acquainted with *Arithmetick*, to be able to make an Eſtimate of the Expence of the Building; to meaſure and ſettle the ſeveral Works of the Artificers; to make up the Quantities of Monies expended, and the ballancing the Accompts between the Workmen and the Perſon who employs them. Likewiſe Arithmetick furniſhes him with Proportions of Numbers, in harmonick and arithmetical Progreſſions, to regulate the external and internal Parts of the Fabrick, which I ſhall delineate in the Courſe of theſe Lectures.

He muſt have ſuch an Idea of *Muſick*, as will conduce to judge the Nature of Sounds, their Accords and Diſcords, their Affinity with Proportion, in erecting Rooms of Entertainment, in Theatres, Churches, *&c.* in which Places Sound is more immediately concerned.

Opticks will be requiſite to be underſtood, as far as they relate to Proportion of Light in large or ſmall Rooms, or as the Situation is to the four Cardinal Points, in which the adapting the internal Apartments, as the Hall, Salloon, Parlours, Withdrawing-Room, Dining-Room, Library, *&c.* are to have proportional Lights, according to their Magnitude and Situation; or in Town Houſes, where Room is wanting, and Light more difficult to attain, there will more Knowledge of Opticks be requir'd.

History will be neceſſary to inform him of the State of *Architecture* in *Greece* or *Rome*, in its Infancy: The Manner of their publick and private

Buildings; their Magnitude, Beauty, &c. which have been handed down to us by undoubted Records, and by which he may regulate and diſpoſe the Apartments in publick Buildings for the Convenience, &c. which they require.

A LITTLE *Philoſophy* will not be amiſs, to inform the Architect of the Nature of Materials; the Qualities of Wood, Stones, Earth, Minerals, &c. Even in the Choice of Situation, the Temperature of the Air, the Nature of Waters, Plants, Vegetables, &c. which Nature produceth in different Situations.

THESE are the Ingredients of Learning, which are to be blended together for the Uſe of an Architect. It is not requir'd that he be a compleat Maſter of each, but only to know as much of them as he can explain for the foregoing Purpoſes. There are few who have a Genius to take in more than theſe Branches for any Science, therefore a ſkilful Deſigner muſt conſequently have taken much Pains to become Maſter of *Architecture*, including thoſe Diviſions of Learning which are to be by him thus underſtood.

As to a Knowledge of the Five Orders of *Architecture*, indeed they are commendable, but it is only the Entrance, the firſt Branches of the Art; the great and valuable Parts of it conſiſt in Deſigning well, to appropriate the ſeveral Parts to Uſe, and make them have an Affinity with the whole: But this only is the Gift of Nature, no Art can teach a Man the way to attain it, unleſs Nature has laid the Foundation; and thoſe which I have mentioned, may be ſaid to be only Aſſiſtants in cultivating and improving the natural Genius.

BEFORE I proceed to the Application of Buildings, to different Situations, or the Uſes of the *Orders*, themſelves, I ſhall trace *Architecture* to its Fountain, and conſider it in its infant State, and by what Steps it has been handed to different Countries, and its Arrival to Perfection: But as that will take up too much of your preſent Time, I ſhall make it the Subject of another Lecture.

I SHALL only add, that I could wiſh to ſee Emulation riſe among us, ſtriving who ſhould excel in doing good Offices to each other: to be inſtructed by, and aſſiſtant to each other, in every *Science*, as far as your Abilities will extend: to ſee the *Mathematicks* and *Architecture*, and the ſeveral dependent Branches of *Literature*, become the Pleaſure of your Diſcourſe, the Delight of your Studies. This, in the End, would be uſeful and entertaining to yourſelves, and an Example worthy of Imitation to others: and in this we ſhould raiſe a Monument which neither Time nor Envy could deface; and, perhaps, in future Years, it may be ſaid, you laid the Foundation to a *Society* chiefly inſtituted for propagating Knowledge without ſelf-intereſted Views. The Memory of ſuch an Undertaking, to be tranſmitted to diſtant Time, will redound much to your Praiſe, and is the ſincere Wiſhes of

*Your Humble Servant.*

Read to the Society, *October* 29, 1730.

## LECTURE III.

IN my laſt *Lecture*, I propos'd to give you a Deſcription of the Riſe, Progreſs, and Extent of *Architecture*, which I intend the Subject of this Diſcourſe, having for that Purpoſe perus'd thoſe Authors who have tranſmitted to Poſterity the Labours of the Antients. Building, in its Minority, was, doubtleſs, not only plain, but irregular, Men ſtudying the Uſes of the ſeveral Parts of the Fabrick, more than Beauty, till Societies began to increaſe in Wealth and Number, by Traffick and Commerce, then they roſe in their Idea to the Knowledge of ſome ſort of Regularity and Proportion in the diſpoſing the ſeveral Parts of their Building; but even this Proportion may be ſuppoſed to be known long before the *Orders* were inſtituted.

WHEN Arts and Learning became famous in *Egypt*, we may ſuppoſe with them *Architecture* flouriſh'd; for we find Works very Elaborate mention'd even among the great Deſigners Contemporary with *Noah*. In the Year of the World 2038, the Walls of *Babylon* are reported to be built by *Semiramis* very magnificent, and eſteem'd one of the Seven Wonders of the World; and the Tower of *Babel* is a remarkable Inſtance of the early Knowledge of Building: Thoſe two famous Pillars, the one of Brick, the other Stone, erected ſoon after the Flood by the Sons of *Noah*, on which were recorded the remarkable Paſſages from the Creation down to the Flood: I ſay theſe are Teſtimonies of an early Progreſs in the *Mathematical* and *Architectural Arts*.

BUT the cultivating and Improvement of *Architecture* is reported to be owing to the *Egyptians*, from their famous Labyrinth adorn'd with *Columns of Porphyry*. The *Grecians* rais'd an everlaſting Monument to their Geniuſes in the Labyrinth at *Crete* built by *Dedalus*. To *Egypt* the firſt *Grecian* Architects were uſed to travel, as our modern Architects do to *Rome*, to refine and improve their Geniuſes, and to apply their Studies to the Rules of their Art. Perhaps the *Egyptians*, in building their Labyrinth, imitated Nature; for as Mazes are form'd by various Turnings and Windings, cut through the luxuriant Buſhes growing wildly among Woods or Trees, and by forming a kind of *natural Arch*, to ſhade and make the Paths more ſolemn and ſecret, ſo the Support of thoſe Arches might be ſome more eminent Trees, which when pruned of their ſuperfluous Branches, repreſented ſo many Columns, and by a little more pleaſing Form, as to Diſpoſition and Shape, undoubtedly their Labyrinth was delineated and erected, and even the *Orders* themſelves muſt have had their Riſe and Inſtitution from ſuch Imitation of *Nature*.

*CADMUS*, the Grandſon to *Agenor* King of *Tyre*, 562 Years after the Walls of *Babylon* were built, brought the *Arts* into *Greece* from the *Phœnicians*, and built *Thebes*, call'd ſo from the famous *Thebes* in *Egypt*; And we find that about 300 Years after the Foundation of *Rome* was laid, that *Phidias*, an *Athenian*, built a Temple of the *Dorick* Order, whoſe Height was 68 Feet to the Roof: The Antients never made uſe of but one *Order* in the Height of their Buildings, after the Manner of St. *Martin*'s Church built by Mr. *Gibbs*: Now let us ſuppoſe the Baſe, Shaft, and Capital, of the *Dorick* Order, to be eight Diameters in Height, and the Entablature two Diameters, we find that the Diameter of thoſe Columns was ſix Feet nine Inches and half, which I only mention to ſhew in what Perfection *Architecture* was at that Time, and in ſuch Eſteem, that the moſt *ſacred* and *magnificent* Structures were not performed without an exact Regularity and Proportion.

*GREECE* was furniſh'd with noble Monuments of Building, which were brought to *Rome* by *Marcellus*. The Temple of *Jupiter Olympus*, the Temple of *Cizcius*, which *Pliny* reports was ſo rich and curiouſly wrought, that in all the Joints of the Stone, Threads of Gold were inlaid to ſeparate them: The Temple of *Trallius*, of *Diana*, of *Pallas*, of *Minerva* at *Athens*, of *Apollo*, *&c.* all ſo teſtify the Nobleneſs, Uſe, and Beauty of *Architecture* before it was brought to *Rome*, that the forementiond Author relates, that *Cecrops*, the firſt King of *Athens*, 200 Years before the Deſtruction of *Troy*, founded a School for the Inſtruction and Encouragement of *Architects*; and it would only weary your Attention, to repeat more Inſtances of its Beauty and Perfection, in the early Ages of the World.

If we reflect on the beautiful Grandeur, and inexpreſſible Magnificence, of many of thoſe never-dying Works of antient *Greece*; if we think on thoſe *lively Ideas* which many worthy and immortal Geniuſes have given us of its State, and alſo reflect on the Felicity, the Happineſs we enjoy, in having the *Art* ſo carefully preſerv'd, when all *her* ſtately *Cities* and *Temples* are deſtroyed, and their Names, perhaps, buried in their Ruins: I ſay, if we weigh this, we cannot value or eſteem *Architecture* too much; its Beauties, in ſpite of devouring Time, will ſtill charm us; the gay, the glittering Image, ſhines with gleaming Rays of Light on the ſeveral Paſſions of the Mind; according to the Symmetry and Diſpoſition of their Works, we behold them with Admiration, and they ſoften us into unutterable Pleaſure.

*GREECE* happily perfected the *Arts*; but *Rome*, rais'd by Ambition, *Prometheus* like, ſtole *Architecture* from her, and laid deſolate its Glory. The Emperors pull'd down their ſtately *Edifices* and *Temples*, and tranſported to *Rome*, and there confin'd, the Art and Materials, to raiſe a Name to immortalize themſelves and Poſterity.

*ROME*, poſſeſs'd of a Prize ſo glorious, and of ſo ineſtimable Value, and at the ſame Time Miſtreſs of ſo many populous Kingdoms, ſelected together the greateſt Artiſts of thoſe Times, and, by an unwearied Purſuit, trac'd the Paths and Footſteps of the worthy *Grecians*, both in *Learning* and *Government*. *ATHENS* furniſh'd them with exemplary Rules; and being naturally aſpiring, they endeavour'd to ſhew the excellent Perfection of *Architecture*, in the ſeveral noble Structures and Temples which they erected to the Honour of their Emperors, and the victorious Conqueſts they made, whoſe Remains continue even to this Day, in the Works of thoſe great

Geniuſes who flouriſh'd in the 14th and 15th Centuries.

*MARCELLUS*, happy in Victory as well as a fine Genius, brought from *Greece* one of the moſt beautiful and regular Pieces of *Architecture* extant, which is in the Theaore call'd after his Name. And *Pompey* the great, though unfortunate Hero, is reported by *Tacitus* to have built the firſt Amphitheatre at *Rome*. The Baths of *Docleſian*, the Palace of *Nero*, the *Rotunda*, the Theatres, and upwards of 50 Temples dedicated to their Deities, their Triumphal Arches, *&c.* give us a vaſt Idea of the Perfection of *Architecture* at *Rome*, in its flouriſhing State under the Conſuls and Emperors: They were ſo much given to building, that they endeavour'd to *excel* each other in Pomp and Magnificence in the public Edifices they erected for the Ornament and Uſe of the City.

It was a happy Time, when diſtant Ages, which long ſince has roll'd away, ſhould have ſo juſt a Taſte of the excellent Perfection of *Architecture*. The Richneſs and Expence of ſo many *magnificent*

*nificent Structures* in Times of Peace, exercis'd the buſy-minded, and kept their Government in a quiet and regular Manner: But when *Architecture* declin'd, Inſurrections and domeſtick Wars chang'd their manner of Government, and unhappily fell a Victim with it, after it had been in a flouriſhing State at *Rome* upwards of 700 Years.

WE have ſeen *Architecture* in its beautiful State, in its meridian Luſtre and higheſt Perfection.—Extreams in all Things muſt ſuffer Change. — *Architecture* ſtood long the Glory of *Rome*, but *Fate* ſuffers it to be buried in Oblivion near 800 Years—ſucceſſive ages of Ruin and Deſolation! Nothing but Fragments are left; and where famous Cities and noble and magnificent Structures once rear'd their lofty Heads, now are nothing but a wild uncultivated Scene of Deſolation.

*ALLARICUS*, King of the *Goths*, about the Year of Redemption 412, took *Rome*; and after that *Oadoacer*: And *Genſericus* King of the *Vandals*, brought 300,000 Men out of *Africa*, and made it waſte and almoſt deſolate, in the Year 456.

In ſhort, *Ignorance* and *Brutality* had ſo infatuated that Age, that they conſpir'd to ruin and deſtroy all the ſtately Structures which the *Romans* had built for the Encouragement of Arts; for which Purpoſe the *Viſigoths* in *Spain*, the *French* in *Gaul*, and the *Vandals* in *Africa*, unanimouſly agree to compleat the Deſtruction; and in the Year 596, the *Saracens* deſtroy'd and laid in Aſhes a fine City named *Meſſina*, not far from which was the beautiful City of *Cuma*, whereof is the Remains of a fine Arch call'd *Arco felici*, an antient Performance; and at *Naples* remains the Gate of *Caſtor* and *Pollux*, whoſe Meaſures are tranſmitted to us by *Palladio*.

I HAVE paſs'd over a Scene ſo ſhocking with as much Brevity as poſſible, to ſhew you that though *Architecture* lay buried in Heaps of Ruins 800 Years, though nothing was practiſed but in the rude *Gothick* Manner, yet the 14th Century produc'd Geniuſes who brought *Architecture* from its Tomb, and rais'd it, like the *Phœnix*, to new Life from its Aſhes; which was by ſettling an Accademy at *Florence* in the Year 1400, in which were many great and noble Geniuſes and Students, who by inſpecting into the Ruins, (if it be not improperly ſpeaking) once more perfected the Art.

In this Academy was *Lawrence Ghiberto*, a Goldſmith by Profeſſion, who built the Church of St. *Mary delli fiori* at *Florence*, which, among the Judges of the Beauties of *Architecture*, is had in equal Eſteem with the Productions of the celebrated *Palladio*.

It would be endleſs to mention the *great* Geniuſes of which the Academy was compos'd, or who flouriſh'd in the 14th and 15th Centuries, ſince their Works ſufficiently teſtify their Care and Aſſiduity to preſerve the Beauties of the Antients in Building, and of which our young Students in *Architecture* have the Pleaſure of many of them tranſlated into *Engliſh* for their Inſtruction; eſpecially thoſe of *Palladio*, which, by the Care of Mr. *Leoni* and Mr. *Cole*, who in a more particular Manner have made the Works of *that* great Maſter uſeful to all that make the Study of *Architecture* their Delight.

BUT the greateſt Happineſs to us, is the having *Architecture* in as much Perfection as ever it ſhone in at *Rome*, and even practis'd by a few Perſons, whoſe excellent Taſte of the Art leads them to follow theſe Paths. But this is chiefly owing to *Inigo Jones*, whoſe Qualifications, join'd with a felicitous Opportunity of travelling to *Rome* and other contiguous Countries, gave him ſo ſenſible and ſtrong Ideas of the Beauties of the Ancients in *Architecture*, that he met with a deſerv'd Encouragement in the Practice of the Art; which may be ſeen in the many beautiful and regular Buildings which he deſign'd or erected, and by the Care of the Right Honourable the Earl of *Burlington*, are collected together in Miniature.

THE Manner of the antient *Architecture* is Grand and Auguſt; there is ſomething Solemn and Awful in it: It conſiſts of large and ample Diviſions, a bold *Relievo*, and regularly proportion'd: The Parts were analogous to the Whole, and perform'd with ſo exact Adherence to Harmonick Rules, that their Buildings, as well

Internal as External, ſo charm'd the Mind of the Beholder, that the Architects were often, by the Vulgar, thought to be inſpir'd, when, in Fact, the Beauty and the Pleaſure their Works gave, were only the Effects of a well-choſen Symmetry connected together according to the Harmonick Laws of Proportion; which of Neceſſity produce that Effect upon the Mind through the Eye, as the Chords or Diſcords of Muſick affect it through the Ear.

THEIR Decorum was always juſt in every Repreſentation, whether ſerious, jovial, or charming: For this End they eſtabliſh'd a certain *Modus* to be obſerv'd in the Uſe and Application of the ſeveral *Orders*; and by theſe Rules they always kept Pace with Nature, and ſtill, by a ſtrict Obſervance of them, they produc'd the various Effects for which they were intended. The *Dorick* Order was to grave and ſolemn Uſes, and call'd the *Dorian* Modus: The *Ionick* Order to Riant Uſes, and call'd the *Ionian* Modus: The *Corinthian* Order was us'd in Palaces, *&c.* and call'd the *Lydian* Modus.

The Uſe, Application, and Proportion of theſe *Orders*, I intend the Subject of enſuing *Lectures* ; in the mean while remain,

*Yours*, &c,

Read to the Society, *Nov.* 12, 1730.

## LECTURE IV.

GENTLEMEN,

A SUBJECT ſo beaten and exhauſted as that of *Architecture*, will undoubtedly require a better Genius to engage your Patience, to ſome few Remarks and Obſervations, which. for my own private Amuſement, I have made ſince our laſt Night's Meeting; and, perhaps, they may be ſo illy digeſted, and irregularly plac'd, as not to merit your Notice. However, as my chief End and Deſign is rather a Divertiſement to ſome few Friends, by whoſe Importunity I have been prevail'd on to renew ſome former *Lectures*, I ſhall, without farther Apology, beg your Attention.

MY laſt *Lecture* conſiſted chiefly in an hiſtorical Deſcription of *Architecture* in general, confin'd to ſuch particular ſtated

Periods of Time, as have been handed down to us by Hiſtory or Tradition; and I think I endeavour'd to make it apparent, what Changes, and Viciſſitudes of Fate it has undergone; ſince it receiv'd that Perfection and Beauty from the *Grecians*, even from *Pericles* to *Marcellus*, and ſo progreſſively to *Inigo Jones*, and that great Genius Sir *Chriſtopher Wren*. I now propoſe to ſhew the Difference between the Antient, the *Gothick*, and our Modern *Architect*, without Prejudice or Partiality, confining myſelf to ſuch particular Obſervations only, which are neceſſary to inſtil the firſt Principles of *Deſigning* into the Minds of young Students in *Architecture*.

IT may not be amiſs, for the better underſtanding my Deſign in this *Lecture*, to ſhew what is the chief Care of an *Architect* to obſerve; which is *Regularity* and *Proportion*: thoſe are the moſt eſſential Parts to be conſider'd in the Art of *Deſigning*. That the Antients had this Happineſs of Thought in View in their Performances, is undeniable; and in many Particulars I ſhall make it apparent, when I draw a Parallel between the Antients and Moderns; and, perhaps, in ſo obvious a Manner, that none of you can miſtake what that Difference conſiſteth in, and by what Methods an adequate Knowledge of the Antients may be attain'd.

In my laſt *Lecture* I obſerv'd to you, that the *Gothick* Architecture prevail'd in *Italy*, and throughout the reſt of *Europe*, after the Deſolation made by the *Vandals* and *Saracens*, about 930 Years, and ſo continu'd till the Year 1400, in which an Academy was ſettled at *Florence*, which reviv'd the antient *Architecture* in many of thoſe Buildings now remaining, which were by them then perfected.

Regularity and Proportion are the fine Parts of *Architecture*, and theſe are perform'd by ſtated Rules, handed down to us by the Care and Vigilance of preceding Ages, to whom we owe all our Knowledge, as well Hiſtorical as Architectural. I ſay Buildings are to be perform'd by ſtated Rules, as the ſeveral Parts of Muſick in Concert are; in which, if one Inſtrument is illy tuned, or in a different Key, it immediately creates a Jarring and Diſcord, which is not to be remedied without ſetting aſide that Inſtrument, or putting it in a proper Key with the reſt: The ſame Rules perfect *Architecture*, and are eſſentially neceſſary in its Performance; which I ſhall ſhew by and by.

THE *Goths* and *Vandals* were a rude, barbarous, and unpoliſh'd People; and, perhaps, that *Architecture* which is call'd the *Gothick*, deriv'd its Name only from its rude and ill digeſted Form, not much differing from that unrefin'd Part of Mankind; having in their Aſpect and Deportment, a Ruſticity and Wildneſs not to be imitated; and as they ravag'd *Europe*, and ſpread themſelves over moſt Part of Chriſtendom, it might become a Proverb amongſt Men, to term every Thing *Gothick* which was irregular, diſproportion'd, or deform'd.

THE Art of *Deſigning* was undoubtedly loſt in thoſe dark Ages, when Men were led blindfold to Learning, through the Caprice and Humour of a Set of Men who endeavour'd to engroſs that refin'd Part of our Species to themſelves; and their Care of ſomething *leſs* material might prevent them from ſpeculative Enquiries about Arts and Sciences, contenting themſelves with the vulgar *Goût* and Opinion, eſteeming the ſevere Diſcipline of Study, either too difficult, or unworthy of their Notice; ſo Errors, by Degrees, were introduc'd, cheriſh'd, and practis'd, without Regard or Enquiry into the Reaſonableneſs or Unreaſonableneſs of its Performance.

If we look upon that great expenſive Building of *Weſtminſter-Abbey*, erected by *Edward the Confeſſor*, about the Year 1060, take in all its Parts, its Proportions, or Symmetry, it appears only a heavy, lumpiſh, unrefin'd Maſs of Materials jumbled together without Deſign, Regularity, or Order; the Middle Iſle is too long and too high for its Breadth: The Symmetry of the External Part has no Analogy to the Internal; the Multitudes of little Pillars have no Proportion to the Parts to which they are connected; the Windows are perform'd without Rule, without Beauty, or Deſign; and if they happen to ſtart into a kind of Proportion, it is only blind Chance which inadvertently leads them to it. If we take a Survey of all our antient Cathedrals, ſuch as *Saliſbury*, ſo much wonder'd at, there is nothing worthy our Notice, but the Height of the Spire, and prodigious Expence Men have been at to perpetuate their Folly to future Times. The Riches which have been exhauſted from the Natives of this, as well as other Countries, to erect Abbies, Monaſteries, Nunneries, Churches, *&c.* and the large Endowments left to ſupport them, need not give Men much Trouble to think why ſo much Pains have been taken to render them as beautiful as their Geniuſes would reach to make them.

If the profuſe Millions of Money expended in forming ſo many *Gothick* Buildings in this Kingdom, had only been appropriated to erecting Seminaries of uſeful Learning, and in ſo beautiful a Form as even ſome of our Moderns have a Taſte of, with what Elegance and Splendour would this Iſland ſhine, and become more than Competitor with *Rome* in all its Glory. Compare old St. *Giles*'s, or old St. *Martin's in the Fields*, Churches, with their new, and every one will undoubtedly ſee what that Symmetry is which gives ſuch Pleaſure to the Eye of the Beholder. I do not ſay theſe are without Faults, but they are ſo few, compar'd with any *Gothick* Edifice, that they ſeem not to be; and I believe the Expence of the old trebly exceeded either of the new, in Proportion to the Value of Money when each was built; we ſee partly an Inſtance of this in the Repairs of the *Gothick* Works; what Time, what Waſte of Materials, *&c.* do thoſe Reparations make.

WHAT I have ſaid is to ſhew not their WANT of Encouragement, but Taſte and Genius, at the Times when that rude, irregular way of Building prevail'd throughout *Europe*; while the noble Structures of antient *Rome*, the Baths, Triumphal Arches, Temples, *&c.* lay demoliſh'd by envious Time, and ſcarce any thing remain'd of pure *Architecture* but its Ruins and Name.

As *Palladio*, if not the firſt, was the chiefeſt Reſtorer of Antiquity, and by whom our Moderns are principally guided; I ſhall endeavour to ſhew you his Blemiſhes as well as Perfections, whereby you will be render'd capable of avoiding the one, and embracing the other. As Buildings, by Time, were beautified and regulated under certain Proportions allotted by the Antients, ſo they were adapted to the Strength requir'd in the Edifice to be erected; and under the Difference of theſe Proportions of Heights and Diſtances which the Antients made uſe of to each *Order*, are ſtill preſerv'd all the Beauties contain'd in *Architecture*, and are to be varied as extenſively as the Mind can invent, differing only in the Form or *Modus*; as the Multitudes of Tunes are perform'd by only the ſeven Notes in *Muſick.*

UNDER theſe Proportions may be conſider'd the *Orders* diſtinctly, either with, or without their *Pedeſtals*, *thoſe* being contriv'd only to raiſe the *Column* or *Pilaſter* to ſuch a Height which was requiſite to perform its Office, without having the Aſſiſtance of another *Order* over it, which is repugnant to all the Rules of *Architecture*, and the Practice, in particular of the Antients.

*PALLADIO* juſtly obſerves, that there is an abſolute Neceſſity of a ſtrict Adherence to the Practice of thoſe Rules and Proportions of the Antients, which thoſe Perſons who meaſur'd the Ruins of Antiquity laid down from the Buildings themſelves, which they collected in Fragments, and tranſmitted to us by particular Meaſures; though, perhaps, he ſometimes follows the Caprice or Humour of the Perſon for whom he built, or the Cuſtom which moſt prevail'd in *Italy* at that Time; for he ſometimes deviates from that Nobleneſs and Grandeur which appears in thoſe Buildings erected with one *Order*, which may be eaſily diſcern'd by comparing Plate 2d, 54th and 55th, with the 15th, 35th, 47th and 60th of the ſecond Book; the two firſt of which being of the *Ionick*, and the other two of the *Corinthian* Order, with proper Intercolumniations, only *one Order* in the Height of the Building.

THE Antients never exceeded three Diameters Intercolumniation, except in the *Tuſcan* Order; but then they never made them leſs than one Diameter and half, generally approving the Mean between three Diameters and one and a half, which is that Proportion call'd *Euſtylos*, of two Diameters and one fourth, appropriating it as a mean Proportion to the *Ionick* Order, the *Diaſtylos* to the *Dorick*, and the *Syſtylos* to the *Corinthian*, which in all their Temples and Edifices they ſtrictly obſerv'd; as may be eaſily prov'd by the Temples of *Vitruvius*, and the *Roman* Antiquities collected by *Serlio*, *Palladio*, *Deſgodetz*, *Montfaucon*, and others, who meaſur'd exactly the Remains which Time had left.

THE Reaſons which induc'd the Antients and their Imitators to follow thoſe due Proportions in Intercolumniations, were, that if ſmall Columns are made with large Intercolumniations, it will very much diminiſh their Beauty; for the too great Quantity of Air or Vacuity between, will leſſen their Thickneſs in Appearance to the Eye; and large Columns, ſuch as thoſe at the Admiralty, by having ſmall Intercolumniations, makes them appear heavy, thick, and diſagreeable; more eſpecially as the Sides of the Building, inſtead of falling from the Front, advance, and contract the circumambient Space which ſhould add to the Proportion of ſo large Columns.

THE Antients taught us, that if the Diſtance or Intercolumniation be three Diameters, the Column ſhould be ſeven and one half; or eight Diameters high, as the *Dorick*, having the *Diaſtylos* ; if two and one fourth, the Columns ſhould be nine Diameters high, as the *Ionick*, or Proportion *Euſtylos* ; and if of two only, the Columns ſhould be nine Diameters and one half high, as the *Corinthian*, with the Proportion *Syſtylos* ; in which the Uſes may ſerve for that Variety of Examples of Intercolumniations which *Vitruvius* makes Mention of in the ſecond Chapter of his third Book.

If the Antients, and their Imitators in *Architecture*, have been thus curious and obſervant of the different Intercolumniations, they ought as cloſely to be follow'd as any Proportions of *Architecture* in General and Particular ; and if to the *Corinthian* Order I give ſix Diameters Intercolumniation, I may as well make its Height twelve, and let the Capital be two Diameters, the Monſtrouſneſs of ſuch Proportions would ſoon diſcover the Weakneſs and Singularity of the Perſon who ſhould ſo far deviate from the eſtabliſh'd Rules of Antiquity : Therefore I ſhall from hence make it appear, that two *Orders* erected one over the other in the ſame Range of Building, is contrary to all the ſtated Rules of *Architec-*

*ture*, and renders a Deſign ſo perform'd, diſagreeable to the Eye, and contrary to the Mathematical Principles of *Architecture*.

First, It is contrary to all the ſtated Rules of *Architecture*. If the *Ionick* Order has been by the Antients allow'd to have only two Diameters and one fourth Intercolumniation, and on that you erect the *Corinthian* Order, whoſe Diameter at Bottom ſhall be equal to the Top of the Diameter of the *Ionick* Column underneath, then the Intercolumniation of the upper or *Corinthian* Order, inſtead of being the Proportion *Syſtylos* for the *Corinthian* Order, will increaſe to more than the Proportion *Dyaſtylos*, or three Diameters allow'd only to the *Dorick*: Therefore it is the reverſing the Rules of *Architecture*, to give ſuch Intercolumniations to one *Order*, which have, perhaps, never been extended to another more capable of diſcharging the Weight, which both Art and Nature is ſuppos'd to have Place there to ſupport.

Secondly, It renders a Deſign ſo perform'd, diſagreeable to the Eye, and contrary to the Principles of *Architecture.* For Inſtance, the *Dorick* Order is more robuſt and maſſy, and by its Proportions render'd more capable of ſupporting any Weight, than the *Ionick*, for which Reaſon it has a greater Intercolumniation given to it; if therefore to the *Ionick* Order I allow the Intercolumniation of the *Dorick*, I conſequently revert the ſtated Rules of the Antients, and lay on it a heavier Burden than Art and Nature intended for it: And if on the *Dorick* and *Ionick* I place the *Corinthian* Order, I give five Diameters or more Intercolumniation, which even the *Tuſcan* is not allow'd, unleſs in *Arcades*; therefore they muſt be contrary to the Mathematical Principles of *Architecture.* How can a light, effeminate, tender *Order*, ſupport at ſuch prodigious Diſtances, a Burden which the more robuſt and ſtrong have been, by repeated Practices, prov'd incapable of ſuſtaining?

THIRDLY, The introducing more than one *Order* in the Elevation of a Building, if not a modern, is a capricious Invention. Obſerve the Temples and publick Edifices of the *Greeks* and *Romans*; they have but one *Order*, becauſe the *Orders* cannot be ſuppos'd to ſupport a Floor if they are Inſular; and being attach'd to a Building, the Walls diſcharge the Weight of the Floors, the Duty of the Columns being only to ſupport the Entablature and its dependant Weight. Likewiſe the Beauty and Grandeur of thoſe Deſigns of one *Order* only, may be ſeen in the Temples, *&c.* I before mention'd; eſpecially if you compare them with the 54th and 55th Deſign of *Palladio*'s ſecond Book of *Architecture.*

WHEN I mention thoſe two Deſigns of *Palladio*, I am to obſerve, that he ſo far diſowns them for Examples of Practice, that he ſays they were made while he was young, and calls them in his Deſcription, New Inventions of his own, and had not been executed; and if *Palladio* ſeems ſometimes inconſiſtent with himſelf, our great Moderns have fallen into as unpardonable Errors. Even the immortal Mr. *Gibbs*, in that beautiful and noble Building of St. *Martin*'s Church, has ſo far outdone that Deſign of St. *Mary* in the *Strand*, that the Genius of the ſame Author is no way viſible; and they ſeem as different in the Deſign, as if it were one of *Inigo*

*Jones*, and the other of Sir *John Vanbrugh*'s.

I CANNOT help making Uſe of that fine Diſtich of Mr. *Pope* in his *Eſſay on Criticiſm*, when he ſpeaks of Men differing from themſelves at different Times, he ſays,

> *As when the Wit of ſome great* Genius *ſhall*
> *So overflow, that is, be none at all.*

Therefore at that Time *Palladio* might have a Superfluity or Overflowing of Genius.

BUT to return to the Practice of the Antients in raiſing Buildings to a requir'd Height: They either erected the *Orders* on a Pedeſtal, or on a Ruſtick Baſement; or if that prov'd inſufficient for its Magnitude, they plac'd an Attick over the *Order*: This has among the Antients been frequently practis'd, eſpecially in their Triumphal Arches, which our Moderns may be ſaid to have juſtly imitated.

THAT which I now principally aim at, is to have every one of you judge in this nice Criſis of Deſigning for himſelf; for which Purpoſe I propoſe, for your Speculation, two of the greateſt, the nobleſt, and moſt noted Buildings in the World; both erected in different Countries, both dedicated to the ſame Uſe, and both the Glory and Ornaments of the greateſt and moſt renown'd Cities in the Univerſe: I ſay, thoſe two Buildings St. *Peter*'s at *Rome*, and St. *Paul*'s *London*, I place before you, as Patterns, to engage your Notice and deciſive Judgment. St. *Peter*'s at *Rome* had its firſt Deſign from *Bramente*, a famous Architect, who flouriſh'd in *Italy* about 250 Years ſince; and receiv'd its laſt Model from the great *Michael Angelo*, about 20 Years after the Deceaſe of *Bramante*; and both deſign'd it, as it is now erected, with only one *Order*.

ST. *PAUL*'s was the Deſign of our own Countryman and great Architect Sir *Chriſtopher Wren*, a Genius, for the Principles of the *Mathematicks* and *Architecture*, univerſally eſteem'd; but, I think, has ſo far deviated from the Paths of his Pattern, St. *Peter*'s, that he has thought proper to omit the *Attick* above the *Order* which is in St. *Peter*'s, and has made two *Orders* one over another. The Similitude of the reſt of the Parts, when you compare them, will, perhaps, give you a ſingular Pleaſure, beyond what I can deſcribe, without delineating the Objects themſelves, and placing them in that juſt View which of yourſelves you will undoubtedly take.

Ffom this Point I might deſcend to many general Obſervations of Form, Magnitude, and Proportion, and from thence to Situations, Materials, and Orders in particular; but as this *Lecture* has already intruded on your Patience, I ſhall refer it to, perhaps, ſome enſuing, when Time and Opportunity offers, and that it may be thought worthy your Notice.

Gentlemen, in a Deſcription of this Kind, it is impoſſible to make uſe of thoſe florid Expreſſions, thoſe eloquent Deſcriptions and rhetorical Sentences, which might have been expected from me, in a Diſcourſe of another Nature: Therefore the Defects in my Language, muſt not be imputed to my want of Abilities in this Particular. I have only conſulted the Genius of my Friends, the

Truth of my Aſſertions, and the Sincerity of my Deſires, in being acceſſary to every good Office which may procure Knowledge; and if I miſs in my Deſign, I hope the want of ſuch Succeſs will not be imputed to the want of Judgment, in one that at leaſt meant well; who is likewiſe,

*Gentlemen,*

*Your moſt humble Servant.*

Read to the Society, *Dec.* 31, 1732.

# LECTURE V.

GENTLEMEN,

AT the Concluſion of my laſt *Lecture*, (which was a Deſcription of the Antient, the *Gothick*, and our Modern *Achitecture*) I propos'd to ſhew you what kind of Situations ſuit with the different *Orders*, and what kind of Proportions are to be uſed, for preſerving a ſtrict Regularity and Harmony; with ſome uſeful Reflections on Examples of publick and private Buildings; in which the Application of the *Orders*, and Choice of Situation, are, or have not been conſider'd by the Builder; which I now propoſe to make the Subject of this *Lecture*.

WHEN I ſpeak of Situation, it muſt not be ſuppos'd that I mean proper Choice of it in Towns or Cities, where every *Order* is promiſcuouſly perform'd, and, perhaps, in the ſame Pile of Building; but I would be underſtood, ſuch Situations which are the proper Choice of Retirements, where a Sameneſs ſhould be preſerv'd between *Art* and *Nature*.

CONVENIENCE is certainly the firſt Thing to be conſider'd in Choice of Situation; what Supplies of Water, of Proviſion, of Carriage, *&c.* can eaſily and ſpeedily be attain'd: For without theſe principal and neceſſary Conveniences, for the Support of little Commonwealths of Families, a Structure would ſoon be deſerted, and left a Reſidence only for the Fowls of the Air to retire to, from the Inclemencies of the Seaſons, and a Place of Repoſe.

BUT it is at the ſame time to be obſerv'd, ſuch Situations which produce ſuch Supplies, are not difficult to be found: And, perhaps, with the Additions of a healthy and fertile Soil, uninterrupted Viſtas and Avenues, an agreeable River, or ſome opening Lawn, or at leaſt a diſtant Groupe of Hills and Vales diminiſhing from the Eye by a pleaſing Gradation: I ſay ſuch an agreeable Spot of Ground, where Nature wantons in Luxuriancy, is the firſt Care of a Builder; and by a proper Deſign compos'd to blend Art and Nature together, muſt conſequently render it the Delight of the Inhabitant, and give an unſpeakable Pleaſure to the Eye of every Beholder.

A Person who builds on ſuch a uſeful and delightful Glebe, muſt doubtleſs not only agreeably improve that *Fortune* which Providence has ſupplied him with, but likewiſe perpetuate his Judgment to his Poſterity; it muſt render his Off-ſpring a Happineſs and Pleaſure, which gives a true Reliſh to Life. But he who, on the contrary, lays the Foundation of his Fabrick on a barren or unpleaſant Soil, or on a bleak Wild which Nature ſeems to have deſerted, is, conſequently, only perpetuating his Folly to future Ages.

But it is to be obſerv'd, that every one that builds has not an equal Felicity in the Opportunity of chuſing a fine Situation; therefore ſome muſt fall into little Errors and Inconveniences: But it were better to have an ill-ſhap'd Hand or Leg, than to have none. Therefore Conveniency muſt he preferr'd to Beauty; and the fine Proſpect, the opening Lawns, the diſtant Views, muſt give way to a more healthy, a more temperate, or more convenient *Soil.*

I MIGHT here deſcend to ſhew you by what Methods you muſt proceed to diſtinguiſh a healthy Soil, ſuch as by the Complexion of the Inhabitants, the Health of Cattle, and even by the Soundneſs of *Stones* and *Trees*, are known; and in the choice of *Water*, concerning its Goodneſs, by being in running Streams, not ſtagnated, muddy, or leaving any Sediment in the Veſſel, its Remoteneſs from Lakes or Ponds of Water, *&c.* But as this would divert your Thoughts from the Application of Buildings, to a proper Situation; I ſhall refer it to another *Lecture*, or to *Alberti*, or *Andrea Palladio*, who has ſaid what is neceſſary on this Subject, in his firſt and ſecond Books of *Architecture.*

As Nature requires a Sameneſs, when Art is made uſe of to add Luſtre to her Beauty; ſo Art never more agreeably pleaſes us, than when ſhe has a Reſemblance of Nature: Therefore, by a kind of Sympathy and Attraction, when both are blended or mingled together, ſo as to be preſerv'd without ſtarting into Extreams, they muſt neceſſarily give that Pleaſure to the Senſes, which alone can flow from the nice Hand and Skill of the Deſigner.

In this, I think, our modern Way of planning Gardens is far preferable to what was us'd 20 Years ago, where, in large Parterres, you might ſee Men, Birds, and Dogs, cut in Trees; or, perhaps, ſomething like the Shape of a Man on Horſeback—— (pardon this Digreſſion.)—— In *Architecture* Men have fell into Methods equally abſurd. In ſome Places, may be ſeen little Boys ſupporting a Burden of a Monument that had been the Labour of 10 or 12 Perſons to place there; or a *Corinthian* Column ſet in a Fiſh-pond, and a *Tuſcan* at the Entrance of a Summer-houſe. I ſay, ſuch Inconſiſtencies in Nature always hurt the Imagination, and we view ſuch Objects with more Pain and Surprize than any Pleaſure they can poſſibly give us.

A CHAMPAIGN open Country, requires a noble and plain Building, which is always beſt ſupplied by the *Dorick* Order, or ſomething analogous to its Simplicity. If it have a long extended View, it were beſt to range the Offices in a Line with the Building; for at diſtant Views it fills the Eye with a majeſtick Pleaſure. A Situation near the Sea requires the ſame, or rather a Ruſticity and Lowneſs: The Vapours of the Sea, by its ſaline Qualities, expand themſelves ſome Diſtance, and always are a decaying Principle; and with the boiſterous Winds which blow from it, muſt, conſequently, require a Power forcible enough to withſtand its corroſive Quality.

THE chearful Vale requires more Decoration and Dreſs; and if the View be long, or ſome adjacent River runs near it; the *Ionick* Order is the moſt proper; where Nature ſeems to *wanton* in Dreſs, and is gay in *Verdure*, ſhe requireth Art to aſſiſt and embelliſh her, and the Livelineſs of the *Ionick* Order can deck and garniſh the Glebe. If the Spot be an Aſcent, and ſome diſtant Hills or Wood environ the back Part, (in which I ſuppoſe the Front a South Aſpect) then a few Ornaments may be ſcatter'd in proper Parts, to give it an enlivening Variety;—— but Care muſt be had not to uſe Superfluity. If it be on an Eminence, and ſurrounded with Woods, the principal Avenues ſhould be ſpacious: *Portico's* give a grateful Pleaſure to us in the View, and more ſo, if the Front is not contracted by the Avenue, nor continue too near it, to take off the proper Shades and keeping of Deſign.

THE *Ionick* Order is of the three *Greek* Orders the moſt applicable to Situations of various Kinds; and if I ſay her Meaſures and Proportions more pleaſingly attract the Eye, it is not without Reaſon: The Parts are analogous to Nature, in which ſhe has been ſo nicely pois'd between the Ruſticity of the *Dorick* and the Luxuriancy of the *Corinthian*, that I am more apt to believe the *Ionick* Order was invented as a Mean between the *Dorick* and the *Corinthian*, than that the *Ionick* was in ſo beautiful Proportion before the *Corinthian* Order was invented.

THE ſilent *Streams*, the gay, the wanton *Scene*, requires the *Corinthian* Order; where Nature is gilded with lively Landſkips, where the Verdure is blended with Flowers, which ſhe decks herſelf with, and where the party-colour'd Painting of ſome opening Lawn garniſhes her in all her Pride; then the *Architect* muſt have Recourſe to Fancy, muſt mingle his Flowers with Nature, his Feſtoons of

Fruits, *&c.* muſt deck the Fabrick, and be Nature in every thing but Laviſhneſs; the ſame Chain of Similitude ſhould run through the Deſign, riſing from one Degree of Dreſs to another, ſtill preſerving the Conſiſtency of the Parts with the Whole, and keeping that *Mediocrity* in Ornament which the Nature of the Deſign requires.

If this proper Application of the *Orders* ſeem neceſſary in Seats for Retirement, I would beg leave to obſerve, that Cities and Towns require a juſt and nice Conſiſtency in Things. The Proſpect, it is true, cannot be had, but the Expences of erecting many irregular Buildings might be appropriated to better Taſte and Fancy; publick Buildings in particular: A gay and lively Deſign of the *Corinthian* Order, is illy appropriated to an Hoſpital, and a Palace would be worſe with the *Tuſcan.*

A spacious Square, or ſuch an open Place as *Lincoln's-Inn-Fields*, might give room for Elegance and Deſign; but where a proper Diſtance is wanting to view a building at, it makes an uncouth Figure. If you would ſee the Proportion of a Man, you muſt be ſo far diſtant as to take the whole of him in the Eye at once, and Buildings require the ſame Optical Rules.

*GREENWICH-HOSPITAL* has certainly a Nobleneſs and Grandeur in the Deſign; but I could wiſh that it ſtood a Mile from the River, or that it had been erected with the *Ionick* Order: And, I think in this too, the Deſign is not juſtly appropriated, becauſe two *Orders* finiſh the ſame Range, the *Corinthian* is next the River, and the *Dorick* continueth through the Colonade to the South Courts. I muſt ſay, *York-Stairs* have the juſteſt Application of any thing I ever ſaw yet attempted, in relation to a proper Adaption of Deſign.

IF we retreat to a Rural Situation, *Hampton-Court* furniſhes us with a proper Scene, and Sir *Chriſtopher Wren* has juſtly appropriated his Decoration, not running into the Extreams of *Plainneſs* or *Luxuriancy*. The ſame Propriety of Invention has attended that Deſign of Lord *Caſtlemain*, in which *Colen Campbell* was *Architect*. As that Situation has a Mixture of Openneſs and Gaiety, he has blended Solidity and Airineſs extreamly agreeable.

*KENSINGTON-PALACE* affords a long Tract of Deſign, and the Invention of an *Architect* need not be rack'd to ſuit a Front analogous to the Situation: The Avenues are ſpacious, and afford all the Propriety and Delicacies of a *Corinthian* Profile, which is now ſunk into the moſt irregular and diſproportion'd Simplicity that has been any where perform'd.

THIS ill Application of Fancy in the Deſigner, has led many into unpardonable Errors; and that Situation of Sir *Gregory Page*'s, was not worthy of ſo regular a Pile; the Glebe is unfertile, nor does any diſtant Proſpect, worthy Notice invite the Eye, and the principal Front is to a barren Wild, where no Rivulet glides by, no Picture ſque Landſkip nor pleaſing Shades; every thing ſinks into Lowneſs and an uncultivated Scene.

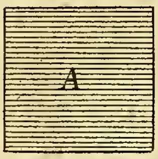
GENTLEMEN, This ſhort Sketch of Situation and Choice of Deſign, will, I hope, give you a juſt Idea of what ſort of Buildings are requir'd by various Scenes of Proſpect; for the Deſigner is to adapt his Building to the Situation, it being, perhaps, impracticable to attain one ſuitable to his Deſign; and it often happens ſuch Impropriety makes a Modern Building look either like an old antiquated Caſtle, or elſe it dwindles into a luxuriant Folly.

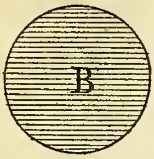
BUT this proper Choice of Situation is not the only Care of an *Architect*; Proportion likewiſe requires our niceſt Application to attain. To ſee on a conſiderable Eminence, the length of a Front little, and the Height diſproportion'd, would appear as abſurd as to behold a Front in a Vale long and extended, and elevated only one Story. And this Choice muſt likewiſe be dependant upon Rules; for as the jarring of Inſtruments by blind Chance cannot poſſibly pleaſe the Ear, ſo the Diſproportion of the Parts of any Object muſt naturally ſhock the Eye; and in both unerring Rules muſt ſo proportion the Sounds, and diſpoſe the Parts, that the whole may be compleat Harmony.

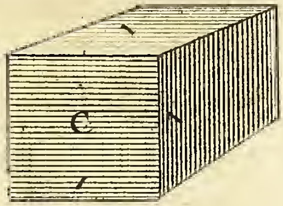
NATURE has taught Mankind in *Muſick* certain Rules for Proportion of Sounds, ſo *Architecture* has its Rules dependant on thoſe Proportions, or at leaſt ſuch Proportions which are Arithmetical Harmony; and thoſe I take to be dependant on Nature. The Square in *Geometry*, the Uniſon or Circle in *Muſick*, and the Cube in *Building*, have all an inſeparable Proportion; the Parts being equal, and the Sides, and Angles, *&c.* give the Eye and Ear an agreeable Pleaſure; from hence may likewiſe be deduc'd the Cube and half, the Double Cube; the Diapaſon, and Diapenté, being founded on the ſame Principles in *Muſick*.

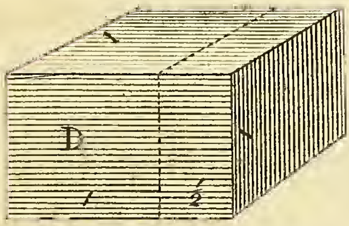
FROM hence may be conſider'd likewiſe the Subduple Proportions of 2, 3, and 4, and their Duplicates, and 3, 4, and 5, likewiſe of 3, 4, and 6; all which I propoſe to explain, and apply their Uſes to the external Part of Building; and it may be obſerv'd, that as theſe Proportions have never been publiſh'd with regard to Building, I hope this Application of Numbers will be an agreeable Speculation for your future Enquiries.

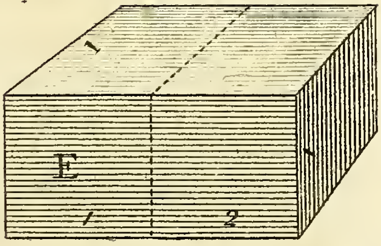
BUT I am to obſerve, that even a Building of 1000 Foot long may have the ſame Proportions, by breaking forward for the Cube, and ſinking to the Diapaſon, and changing the ſame Line to a Diapenté, which Mixture of proportion'd Parts will make the whole agreeable.

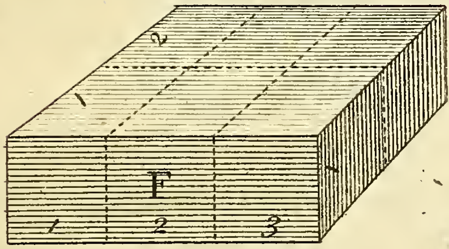


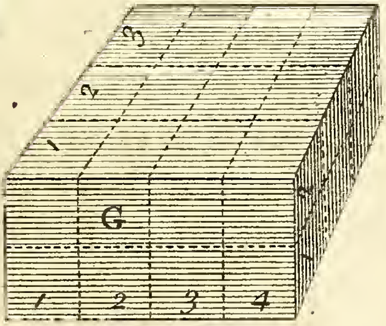


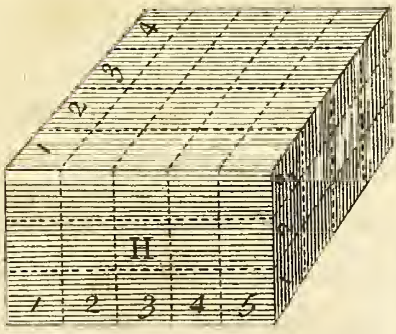








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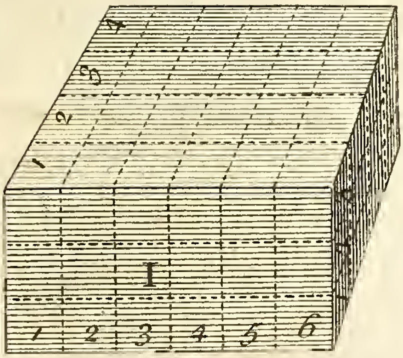
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*Robertus Morris inv.t et delin.* *Toms sculp.t*

If any of the following Proportions be to be perform'd, it muſt be obſerv'd, that the Cube ſhould never exceed 50 Foot; the Cube and half never exceed 60 Foot Front, and the Double Cube never ſhould be more than 80 Foot.

If the Cube be 50 Foot Front conſequently the Depth and Height will be the ſame. See *Fig*. C.

The Cube and half, if the Front be 60 Foot, as *Fig*. D. the Depth will be 40, and Height 40.

The Double Cube of 60 Foot Front, will be 30 Foot deep, and 30 Foot high: This, which is call'd a Double Cube in Building, is only the placing of two Cubes together in Plano; as may be ſeen by *Fig*. E.

The Arithmetical Proportions flow in the ſame progreſſive Channel, and are to be made Uſe of as Neceſſity requires. 4, 3 and 2, with their Duplicates, make an agreeable Front. If the Front be 60 Foot, the Depth is 45, and Height 30; as is ſhewn *Fig*. G. by dividing it into 4, the Depth is 3, Height 2; or if it be 80 Foot Front, the Depth will by the ſame Rule be 60 Foot, and Height 40.

THE Arithmetical Proportion of 5, 4 and 3, if the Front be 60 Foot, the Depth will be 48 Feet, and the Height 36. See *Fig.* H. Or if the Front be 80 Foot, will produce 60 Foot deep, and 48 Foot high; divide the Front into 5 Parts, the Depth is 4, and Height 3.

THE Arithmetical Proportion of 6, 4 and 3, will, if the Front be 60 Foot, produce the Depth 40, and Height 30 Foot; as the *Fig.* I. Or if the Front be 90 Foot, the Depth will be 60, and Height 45.

I SHOULD now proceed to ſhew the Uſes of them, in their Application to Situations and Orders; but as I have, perhaps, already intruded on your Patience, muſt beg leave to make it the Subject of my next Lecture; and am in the mean time,

Gentlemen,

*Your moſt Humble Servant.*

Read to the Society, *Jan.* 21, $173\frac{3}{4}$.

## LECTURE VI.

IN my laſt *Lecture* I deſcrib'd the Beauties of a Rural Situation, and a proper Choice of the *Orders* to be erected in ſuch Situations; adapting them in their Decoration and Dreſs ſimilar to the Beauties ſuch retir'd Villa's require; pointing out likewiſe, where Nature ſeem'd to wanton in Luxuriancy, how to blend Art ſo agreeably with her, to give a Pleaſure to the Eye of the Beholder; and compleating the ſame with certain unerring Proportions to be made uſe of in Buildings of various Magnitudes, ſo as to render thoſe Proportions uſeful by univerſal Rules.

IN Deſcriptions of this kind, *Gentlemen*, it will be almoſt impoſſible to explain every Term in Art, or make my ſelf ſo intelligible, as by an ocular View of the Deſigns themſelves: I muſt therefore content myſelf with making only ſuch Remarks as are uſeful, in forming a juſt Idea of the general or particular Extent of *Architecture*, as it relates to Beauty and Convenience; in which I ſhall ſo endeavour to explain myſelf, as to give you all the Satisfaction that can be expected from a bare Deſcription, in which Words only can convey the Object to your Minds.

BEAUTY, in all Objects, ſpring from the ſame unerring Law in Nature, which, in *Architecture*, I would call Proportion. The joint Union and Concordance of the Parts, in an exact Symmetry, forms the whole a compleat Harmony, which admits of no Medium; it is agreeably blended through the whole, and diffuſes itſelf to the Imagination by ſome ſympathiſing Secret to the Soul, which is all Union, all Harmony, and Proportion.

CONVENIENCE, is the juſt ſupplying of Wants; it is the Handmaid to Nature, aſſiſting us to what is neceſſary in Life; without being incommoded by it, we receive our Meat in due Seaſon; our Sleep without Diſturbance; our Eaſe, our Pleaſure, is centred in Convenience. Our Choice of Situation may delight the Eye, but I obſerv'd in my laſt *Lecture*, that Beauty, or what I now call Proportion, muſt give way to this more important one, Convenience. With theſe two the *Architect* is to endeavour to become not only acquainted, but likewiſe Maſter of, before he attempts to launch into the Field of Deſigning: But when thoſe are attain'd, all the Difficulties in *Architecture* vaniſh, and he can delineate his Ideas from the Cottage to the Palace, ſo as to render them worthy of the nobleſt Encouragement and Imitation.

THERE is this great Diſadvantage ariſes in Buildings which are, or are to be erected in Cities or Towns, that neither Proportion or Convenience can be had. The Irregularity or Littleneſs of the Spot, prevent the *Architect* from ſhewing his Skill in Deſigning: But it is to be obſerv'd, that even that Irregularity or Smalneſs requires his Judgment to diſpoſe of in the moſt advantageous Manner; and ſometimes Nobleneſs itſelf may be ſeen in Miniature, when delineated by a ſkilful Hand. But, perhaps,

haps, the ſame Spot, deſign'd by another, would appear diſproportion'd and inconvenient. When I ſpeak of Deſigns in general, I would not be underſtood to mean thoſe little Buildings for Shops, or ſmall Tenements; but thoſe of a higher Claſs, whoſe Inhabitants may be ſuch to whom Fortune has been propitious enough to make happy under her Protection; though ſometimes thoſe of a lower Degree require the Direction of the *Architect*, and his Skill to perform.

In Towns and Cities, where Trading, and Buſineſs of other Natures, require the Attendance of Perſons of ſuperior Rank, various Parts of it are wanted for their Convenience: The Merchant requires the City for his Reſidence; Pleaſure here gives way for Buſineſs, and Proportion is ſet aſide for Convenience of Warehouſes for Stowage of Goods and Merchandize, which are the Produce of various Countries; the Wine-Merchant for Cellars, the Cotton-Merchant for dryer Store-Rooms, *&c.* in all which the *Architect* is to be acquainted with Convenience.

On the other Hand, the Courtier reſides in the more retir'd Parts of the

Town, where Spacioufneſs and Grandeur are the Object of the Deſigner: Here, indeed, he finds generally the moſt Regularity in his Spot of Ground, and more Space for his Fancy to move in: But as their Reſidence in Town is only a ſmall Part of the Year, and where the Grandeur and Magnificence equal to their Quality, is not ſo much requir'd as in their Country-Seats, ſuch Noblemens Houſes are to be conſider'd only as an Accommodation for themſelves during a ſhort Attendance on Court or Parliament; like the Merchant's Houſe the *Architect* is only to conſider the Convenience, ſuitable to the Dignity of the Perſon, as far as the Spot will admit, reſerving ſuch Apartments for Grandeur as may be leaſt liable to be incommoded.

From what I have ſaid of Proportion and Convenience, as they relate to Town Houſes, there is one unfortunate Exception to both, in which, even by the Report of all Travellers, *Rome* itſelf might have been outdone, both in Magnificence and Proportion, in Delicacy and Convenience: Space is not wanting, an excellent Foundation, the moſt healthy Part of this Noble City, and the Verge of Retirement to the Country, near the Court, the Center of Buſineſs, ſupplied by Water, and all other Proviſions, even to Profuſeneſs; and yet that nice Application of *Deſign* is wanting. There is a Field for Fancy, the World cannot ſhew a Spot of Ground built on ſo Noble, and ſo capable of producing four magnificent regular Sides: If every Builder had agreed as to the external Part, to have made each Range as regular as the Eaſt Side, or with that Grandeur of Eſquire *Shepherd*'s on the North, I may affirm, future Ages might boaſt, that the greateſt and moſt regular Buildings on one Spot of Ground, was erected near the City of *London*, call'd *Groſvenor-Square*.

Let us now retreat into the Country, and view the Advantages of a Rural Situation, where no Impediments lie in the way to Proportion and Convenience, in which the Care and Skill of the *Architect* is under no Reſtraint; where there is room for Dreſs and Decoration, for Grandeur and Uſefulneſs, appropriating the Deſign to Purpoſes requir'd by the Perſon who is to be the Inhabitant. A Gentleman who delights in mixing Profit with his Pleaſures, by keeping ſome Part of his Eſtate in his own Hands, and making the moſt Advantage of the Produce of his Ground, the Center of it is the moſt proper; for then, by a moderate Fatigue, he may view the whole himſelf whenever he thinks fit, and make Improvements round about it; but if poſſible it can be built near a River, it will be vaſtly advantageous, and greatly conduce to its Beauty and Convenience, for by that Means, Carriage of Things in the Produce of the Eſtate is render'd leſs expenſive, the Proſpect will be more agreeable, it will refreſh the Air, and ſerve the Purpoſes of the Houſe, and, if requir'd, in the watering the Meadows, or Paſture Land, Gardens, &c. in all which Convenience muſt have the Preheminence.

If the Situation cannot be had near ſome navigable River, at leaſt, if poſſible, near ſome Brook or running Water, and as diſtant from dead and ſtagnant Waters as conveniently can be, becauſe thoſe impregnate the groſſeſt and moſt unwholeſome Air, which by building in elevated or more open Places, may be avoided; for where the Air is free, and in a perpetual Motion, and the Earth through its

Declivity, purg'd from Damps and Vapours, it generally renders the Inhabitants healthful, gay, and very well complexion'd; but due Care ought to be had that the Houſe be ſituated near ſuch Water that has no particular or offenſive Taſte, that it be clear and light, its Bed on Sand or Gravel, without Mud or Slime to create a Sediment.

THERE is one principal Objection to Situation in general, which is carefully to be obſerv'd, that is, not to build in Vallies that are enclos'd by Mountains or Hills; becauſe Houſes which lie conceal'd in ſuch Obſcurity, beſides the Diſadvantage of their being depriv'd of Proſpect, are prejudicial to Health; the Earth being impregnated with Rains which ſettle there, will ſend forth contagious Vapours, and the Proviſions carried into ſuch Magazines and Granaries, are corrupted with Moiſture; if, on the other hand, the Sun can penetrate into thoſe Vallies, the Reflection of its Rays will create exceſſive Heats; if not, then a perpetual Shade will render the Inhabitants dull and indolent; when the Winds blow into them, they are keen and boiſterous, becauſe of the narrow Paſſage through which they muſt paſs, and when they ceaſe to blow there, the Air will become groſs and ſickly through its Stagnation. Theſe Cautions obſerv'd, I ſhall now paſs to Remarks on Seats built only for Pleaſure or Retirement, where the command of an ample Fortune puts the Inhabitant above the Fatigues attendant on Rural Employment, in which they partake the Pleaſure without mixing with it the Labour.

Noblemens Seats, beſides Grandeur, are erected for a Retirement, or as a Retreat from publick Cares, perhaps in ſome ſilent unfrequented Glade, where Nature ſeems to be lull'd into a kind of pleaſing Repoſe, and conſpires to ſoften Mankind into ſolid and awful Contemplations, eſpecially a curious and ſpeculative Genius, who in ſuch diſtant and remote Receſſes, are free from the Noiſe and Interruptions of Viſitors or Buſineſs, or the Tumult of the Populace, which are continually diverting the Ideas into different Channels: Here Proportion, Regularity, and Convenience, are to be aim'd at in the Performance of the Fabrick, which ſhould be erected with the utmoſt Symmetry and Exactneſs.

The firſt Care in reſpect to Decoration, is the juſtly appropriating the Deſign to the Situation, purſuant to the Rules I laid down in my laſt *Lecture*, ſo blending Art and Nature together as to render it convenient. As theſe Seats are moſt uſed in the warmeſt Seaſons of the Year, Shade is chiefly wanted; and VISTA's through the Deſign each Way, beſides the Pleaſures of ſome diſtant Proſpect, are Inlets to the refreſhing Breezes, which enliven the Spirits, and, by cooling the Rooms, make the Seaſons more agreeable: The Entrances ſhould be Grand, the Rooms Noble and Spacious, and ſhould be contiguous to each other, without the Interruption of Paſſages or Stair-caſes, which ſhould be ſo plac'd, that each Room might have a Communication to them without incommoding another.

THE South Aſpect is moſt preferable for the principal Front, if it can be conveniently had, in which ſhould be the Rooms of State and Grandeur. The Eaſt is the moſt proper for a Library, becauſe the Morning Sun gives an enlivening Warmth to Nature, and then the Spirits are more open, more active and free in the Choice of beautiful Ideas, to furniſh the Fancy of thoſe whoſe Genius leads them to the Study of the Curioſities of Art or Nature.

The principal Floor ſhould be elevated above the Level of the Ground at leaſt two Foot, becauſe it gives you the more extended Proſpect, by being rais'd above Objects which may be an Impediment in the View; it likewiſe is more advantageous in having proper Lights to the lower Offices; in Nobleneſs of Aſpect: In ſhort, the Magnificence of a Building is dependant on the elevating it ſo far above the Eye as to invite the Beholder to conſider the taking in of the whole Scene at one View, where Diſtance can be had; and which ſhould be at ſuch an Angle that the whole may be ſeen without moving the Eye, which is by making the Point of Diſtance from the Center of the Building equal to half the Length and Height of the Building added together. Suppoſing a Front 100 Foot and the Height 40, thoſe added together, half that Length, which is 70 Foot, is the proper Point of Sight where to view the whole Fabrick diſtinctly, without breaking through the Rules of Opticks, in lofty Buildings.

In low Buildings which are of an extended Length, another Point of Diſtance may be uſed, which is by making the Diſtance or Point of Sight from the Houſe equal to the Length of the Front; that is, if the Building be low and 100 Foot Front, the Point of Diſtance will be 100 Foot: And ſome Mathematicians have to this preferr'd another Rule, which is by making the Point of Diſtance an Equiangled Triangle; that is, if the Front be 100 Foot, the Point of Diſtance ſhall be 100 Foot from the Extremity of the Building, and not from the Center, as is propos'd in the preceding Method.

In Hunting-Seats, which are proper for an open Champaign Country, one Story in Height is ſufficient; for as the Seaſons for Hunting are in that Part of the Year which is generally cold, and require a temperate Warmth, to keep equal to that created by the Exerciſe; it muſt be the Care of the *Architect* to preſerve the Lodgings as warm as can be, by making as few Doors and Windows into thoſe Rooms as Conveniency will permit, for as they are ſo many Inlets of Air, they muſt conſequently render the Rooms more Cold, and uncomfortable for Lodging. All Winter Houſes ſhould be ſo contriv'd, while thoſe for the Summer ſhould be more open, to cool and make the Dwellings pleaſant and agreeable.

If the Soil be dry, and the principal Floor be level with a beautiful Garden on a Terras, with ſome remarkable Proſpect, it were beſt to place the lower Offices in a Foſſee, in which theſe Advantages will ariſe; an eaſy Acceſs to the Apartments, and Pleaſure of Retirement into the Garden, without being overlook'd by Servants from the lower Offices; and by the Foſſee a clear open Air is communicated to the Offices, and a Light equal to that of the principal Floor, and this Convenience, that all the Ground (which in other Buildings not ſo plac'd) that lieth againſt the lower Part, and continually damps and renders it unhealthy, is this way remov'd, and the lower Offices become dry enough for Lodgings, if requir'd. As to the Diſtribution of the Apartments of the lower Offices, they are always to be conſider'd, with the

Wants and Conveniencies requir'd by the Difference of Families, Fortune, or Uſes; where the *Architect* is to conſult the general Deſign of the Building, and ſo adapt his Proportion and Convenience. In the principal Apartment, Proportion is to be chiefly conſider'd, and join'd with Convenience; where I am to obſerve ſuch Proportions as are to be perform'd by Rules. As in my laſt *Lecture* I propos'd Proportions for Buildings themſelves, as to the Magnitude of the external Part, by the ſame Proportions I intend now to deſcribe the internal Apartments, ſo that each Room may bear an Analogy and Connection to each other; And if in ſome Places I am conſtrain'd to fall in with the Opinion of others, in this Part I have Recourſe only to my own Fancy: I love to ſtrike out of a beaten Path ſometimes, only to walk the more eaſy, or at leaſt to prevent Diſturbance from the buſy Multitude; and then I have more Room for the Imagination to work upon, and, perhaps, not a little Pleaſure in communicating my Sentiments to Friends without endangering their Cenſure.

As I conſider the Affinity between *Architecture* and *Muſick*, ſo I have produc'd thoſe Proportions from the ſame Rules: In *Muſick* are only ſeven diſtinct Notes, in *Architecture* likewiſe are only ſeven diſtinct Proportions, which produce all the different Buildings in the Univerſe, *viz.*

THE Cube,——the Cube and half,——the Double Cube,—— the Duplicates of 3, 2, and 1,——of 4, 3, and 2,——of 5, 4, and 3,—— and of 6, 4, and 3, produce all the Harmonick Proportions of Rooms.

LET me, for Example, propoſe a Building whoſe principal Floor is 12 Foot high, how to proportion thoſe Rooms which are to be in the internal Part by the preceding Rules.

*Foot* *Foot* *Foot*
If the Height be 12 the Cube will be———— 12 Long, 12 Broad.
If the Height be 12 the Cube and half is ——— 18 Long, 12 Broad.
If the Height be 12 the Double Cube———— 24 Long, 12 Broad.

*Foot* *Foot* *Foot*.
The Duplicate of 3. 2 and 1, if the Height is 12, Length 36, Breadth 24.
The Duplicate of 4. 3 and 2, if the Height is 12, Length 24, Breadth 18.
The Duplicate of 5. 4 and 3, if the Height is 12, Length 20, Breadth 16.
The Duplicate of 6. 4 and 3, if the Height is 12, Length 24, Breadth 16.

These are the ſeven Proportions of Rooms, which are founded upon the ſame Rules as the Uniſon, the Diapenté, the Diapaſon, the Seſquialter, &c. are in *Muſick*, and may be varied to all kinds of Magnitudes whatever, ſuppoſing your Story to be the Standard.

I SHALL only illuſtrate this Rule by one Example more, by ſuppoſing,

| | | | Foot. | | Foot. |
|---|---|---|---|---|---|
| The Height of the Story 18 Foot, | the Cube will be in | Length | 18, | Breadth | 18. |
| | the Cube and half in | Length | 27, | Breadth | 18. |
| | the Double Cube in | Length | 36, | Breadth | 18. |
| The Subduple | of 4. 3 and 2, — | Length | 36, | Breadth | 27. |
| | of 5. 4 and 3, — | Length | 30, | Breadth | 24. |
| | of 6. 4 and 3, — | Length | 36, | Breadth | 24. |
| | of 3. 2 and 1, — | Length | 54, | Breadth | 36 $\frac{1}{2}$. |

*The Rule Explained.*

Suppoſe the Height 18 Foot, and the Subduple Proportion is 6, 4, and 3, divide 18 by 3, and the Quotient is 6, multiply that Quotient by 4, produceth 24, the Breadth, and multiplying it by 6, produceth 36, the Length of the Room: And ſo of all other Proportions.

This ſingular way of Thinking, led me to another new Thought, in proportioning the Magnitude of the Opening of Chimnies to thoſe Rooms by an univerſal Rule, which will likewiſe ſerve for all manner of Rooms whatever. By theſe Rules the Breath of the Chimney, its Height, Depth, and Square of the Funnel for Conveyance of Smoke, are demonſtrated, and in ſo eaſy a Manner, that none of you can miſtake their Application and Uſe.

Rule I. To find the Height of the Opening of the Chimney from any given Magnitude of a Room, add the Length and Height of the Room together, and extract the Square Root of that Sum, and half that Root will be the Height of the Chimney.

Rule II. To find the Breadth of a Chimney from any given Magnitude of a Room, add the Length, Breadth and Height of the Room together, and extract the Square Root of that Sum, and half that Root will be the Height of your Chimney.

Rule III. To find the Depth of a Chimney from any given Magnitude, including the Breadth and Height of the ſame, add the Breadth and Height of the Chimney together, take one fourth of that Sum, and it is the Depth of the Chimney.

Rule IV. To find the ſide of the Square of a Funnel proportion'd to clear the Smoke, from any given Depth of the Chimney, take three fourths of the given Depth, and that Sum is the Side of the Square of the Funnel.—— Obſerve only, that in Cube Rooms the Height is equal to the Breadth, and the foregoing Rules are univerſal.

To prove the Rule univerſally uſeful, I have a Table of all the foregoing Proportions calculated in the preceding Manner, from which I ſhall ſhew you an Example of the Proportions of the ſame, as is before deſcrib'd, and in the following Manner.

| | | | | | | Chimnies. | | |
|---|---|---|---|---|---|---|---|---|
| | Foot. | Leng. | | Bread. | Br. | Heig. | Dep. | Squ. |
| If the Room be in Height | 12, | 12, | and | 12, | 3 0 | 3 0 | 1 6 | 1 1½ |
| The Cube and half——— | 12, | 18, | - - | 12, | 3 3 | 2 8½ | 1 5¾ | 1 1½ |
| The Double Cube-——— | 12, | 24, | - - | 12, | 3 5½ | 3 0 | 1 7½ | 1 2½ |
| | Height. | | | | | | | |
| The Sub-duple of 4. 3 and 2, | 12, | 24, | - - | 18, | 3 8 | 3 0 | 1 8 | 1 3 |
| of 5. 4 and 3, | 12, | 20, | - - | 16, | 3 5½ | 2 10½ | 1 7 | 1 2½ |
| of 6. 4 and 3, | 12, | 24, | - - | 16, | 3 7 | 3 0 | 1 7¾ | 1 1 |
| of 3. 2 and 1, &c. | | | | | | | | |

Thus, Gentlemen, I have not omitted any Obſervation that might prove uſeful to you, eſpecially in the ſtrict Adherence to Proportions, perform'd by Rules. My next *Lecture* will contain ſome uſeful Obſervations on *Light* ſufficient to illuminate Rooms of any Magnitude, by an infallible Method; and ſome general Reflections, which will prove a ſingular Uſe to you, if obſerv'd, in the Performance of any Branch of *Architecture.*

Give me Leave, in the mean time, to aſſure you I am with due Reſpect,

*Yours*, &c.

## *A* Table *of* HARMONICK *and* ARITH-
## Rooms *and* Chimnies *by*

| | | Rooms. | | | Chimnies. | | |
|---|---|---|---|---|---|---|---|
| | | Length. | Breadth. | Height. | Breadth. | Height. | Depth. | Square of Funnel. |
| The Cube. | 1 | 12 | 12 | 12 | 3 0 | 3 0 | 1 6 | 1 1 ½ |
| | | 14 | 14 | 14 | 3 3 | 3 3$^{1}$ | 1 7 ½ | 1 2 ½ |
| | | 16 | 16 | 16 | 3 5 ½ | 3 5 ½ | 1 8 ¾ | 1 3 ½ |
| | | 18 | 18 | 18 | 3 8 | 3 8 | 1 10 | 1 4 ¼ |
| | | 20 | 20 | 20 | 3 10½ | 3 10½ | 1 11¼ | 1 5 |
| | | 22 | 22 | 22 | 4 1 | 4 1 | 2 0 ¼ | 1 6 ¼ |
| Cube and half. | 2 | 18 | 12 | 12 | 3 3 | 2 8 ½ | 1 5 ¾ | 1 1 ½ |
| | | 21 | 14 | 14 | 3 6 | 2 11½ | 1 7 | 1 2 ¼ |
| | | 24 | 16 | 16 | 3 9 | 3 2 | 1 8 ¾ | 1 3 ¼ |
| | | 27 | 18 | 18 | 3 11½ | 3 4 ½ | 1 9 ¾ | 1 4 ½ |
| | | 30 | 20 | 20 | 4 2 ½ | 3 6 | 1 11 | 1 5 ¼ |
| | | 33 | 22 | 22 | 4 5 | 3 8 | 2 0 ¼ | 1 6 |
| Double Cube. | 3 | 24 | 12 | 12 | 3 5 ½ | 3 0 | 1 7 ½ | 1 2 ½ |
| | | 28 | 14 | 14 | 3 9 | 3 3 | 1 9 | 1 3 ¾ |
| | | 32 | 16 | 16 | 4 0 | 3 5 ½ | 1 10½ | 1 4 ⅞ |
| | | 36 | 18 | 18 | 4 3 | 3 8 | 1 11¾ | 1 6 |
| | | 40 | 20 | 20 | 4 5 ½ | 3 10½ | 2 1 | 1 6 ½ |
| | | 44 | 22 | 22 | 4 8 | 4 1 | 2 3 | 1 8 |
| Proport. 4 3 2. | 4 | 24 | 18 | 12 | 3 8 | 3 0 | 1 8 | 1 3 |
| | | 28 | 21 | 14 | 4 0 | 3 3 | 1 9 ½ | 1 4 |
| | | 32 | 24 | 16 | 4 3 | 3 5 ½ | 1 11 | 1 5 |
| | | 36 | 27 | 18 | 4 6 | 3 8 | 2 0 ½ | 1 6 |
| | | 40 | 30 | 20 | 4 8 ½ | 3 10½ | 2 1 ¾ | 1 7 ¼ |
| | | 44 | 33 | 22 | 4 11½ | 4 1 | 2 3 | 1 8 |

### *The* Uſe *of the* Table.

Let the given Height of the Room be 12 Foot to the
of the Room 12 Foot, the Length 18, in the ſame Line
2 Foot 8 ½ Height, 1 5 ¾ the Depth of the Chimney,
to of the Proportion of any Chimney to the given Mag-

## METICAL Proportions, *for Magnitudes of* UNIVERSAL Rules.

| | | Rooms. | | | Chimnies. | | | |
|---|---|---|---|---|---|---|---|---|
| | | Length. | Breadth. | Height. | Breadth. | Height. | Depth, | Square of Funnel. |
| Proportion. | 6, 4, 3, 5 | 20 | 16 | 12 | 3 5 ½ | 2 10½ | 1 7 | 1 2 ½ |
| | | 25 | 20 | 15 | 3 10½ | 3 2 ½ | 1 9 | 1 3 ¾ |
| | | 30 | 24 | 18 | 4 3 | 3 5 ½ | 1 11¼ | 1 5 |
| | | 35 | 28 | 21 | 4 7 ½ | 3 9 | 2 1 ½ | 1 6 ½ |
| | | 40 | 32 | 24 | 4 11 | 4 0 | 2 3 | 1 8 |
| | | 45 | 36 | 27 | 5 2 ½ | 4 3 | 2 4 ½ | 1 9 ¼ |
| Proportion. | 6, 4, 3, 6 | 24 | 16 | 12 | 3 7 | 3 0 | 1 7 ¾ | 1 1 |
| | | 30 | 20 | 15 | 4 0 ½ | 3 4 ½ | 1 10 | 1 4 ¾ |
| | | 36 | 24 | 18 | 4 5 | 3 8 | 2 0 ¼ | 1 6 |
| | | 42 | 28 | 21 | 4 9 ½ | 3 11½ | 2 2 ¼ | 1 7 ½ |
| | | 48 | 32 | 24 | 5 1 | 4 2 ½ | 2 3 ¾ | 1 9 |
| | | 54 | 36 | 27 | 5 5 | 4 6 | 2 6 | 1 10 |
| Proportion. | 6, 5, 4, 7 | 18 | 15 | 12 | 3 5 | 2 11½ | 1 7 ⅛ | 1 1 ¼ |
| | | 24 | 20 | 16 | 3 9 ½ | 3 4 | 1 9 ⅛ | 1 3 ¾ |
| | | 30 | 20 | 10 | 3 10½ | 3 2 ½ | 1 9 | 1 3 ¾ |
| | | 36 | 24 | 12 | 4 3 | 3 5 ½ | 1 11¼ | 1 5 |
| | | 42 | 28 | 14 | 4 7 ½ | 3 9 | 2 1 ½ | 1 6 ½ |
| | | 48 | 29 | 14 | 5 6 | 4 8 ¼ | 2 6 ½ | 1 10¾ |
| Examples. | 1 | 12 | 12 | 12 | 3 0 | 3 0 | 1 8 | 1 1 ½ |
| | 2 | 18 | 12 | 12 | 3 3 | 2 8 ½ | 1 5 ¾ | 1 1 ½ |
| | 3 | 24 | 12 | 12 | 3 5 ½ | 3 0 | 1 7 ½ | 1 2 ½ |
| | 4 | 24 | 18 | 12 | 3 8 | 3 0 | 1 8 | 1 3 |
| | 5 | 20 | 16 | 12 | 3 5 ½ | 2 10½ | 1 7 | 1 2 ½ |
| | 6 | 24 | 16 | 12 | 3 7 | 3 0 | 1 7 ¾ | 1 1 |
| | 7 | 20 | 15 | 12 | 3 5 | 2 11½ | 1 7 ⅛ | 1 1 ¼ |

Cube and ½, the 2d Proportion; you will find the Breadth is the Proportion of the Chimney 3 Foot 3 the Breadth, and 1 1 ½ the Side of the Square of the Funnel: And nitude by the preceding Rules.

## LECTURE VII.

GENTLEMEN,

MY fifth and ſixth *Lectures* conſiſted chiefly of the general Proportions which are requir'd to be made uſe of in the external and internal Parts of Building: When I conſider Proportions, their Efficacy and Uſe, I am led into a Profundity of Thought; each Part of the Creation, conſider'd diſtinctly, or the amazing Structure of the Whole, or the Animal and Vegetable World, fills us with noble Ideas of the Power which ſuch Proportions have on the Mind; I mean thoſe that are made conformable to the unerring Laws of Nature.

IF we immerſe our Ideas into the infinite Tract of unbounded Space, and with the Imagination paint out the numberleſs Multitudes of Planets, or little

Worlds, regularly revolving round their deſtin'd Orbs; if we conſider with what wondrous Skill and Exactneſs they perform their Revolutions, and how harmoniouſly they are whirl'd by their Eccentrick and Concentrick Motions, into their proper Tracts of Revolution; if we imagine the exact Proportion, Diſtance, or Uſe of every one of them, we muſt feel Emanations of the Harmony of Nature defus'd in us; and muſt immediately acknowledge the Neceſſity of Proportion in the Preſervation of the whole Oeconomy of the Univerſe. Were the Planets to move irregularly, without ſtated Laws or Order, all things would ſoon jumble together into original Chaos.

If we ſink lower into the Animal Creation, we ſhall find the ſame Proportions and Order preſerv'd through the whole Race of Beings; and even the Vegetative Tribe, in their ſeveral Claſſes, ſpring from the ſame uniform and exact Rules; and their Proportions inſenſibly ſtrike the Imagination by ſome ſympathizing Secret, which, perhaps, Futurity only can unravel.

Men, from the repeated Inſtances of Order in Nature, undoubtedly, firſt found the Neceſſity of performing every thing by ſtated Rules; there being the greater Certainty of the Exactneſs of their Performance, than if blind Chance were to direct them to the Choice of thoſe Proportions: From hence the Study of Arts and Sciences neceſſarily ſprung; more particularly, thoſe Branches which are dependant on the *Mathematicks*, ſuch as *Muſick*, *Sculpture*, *Painting*, *Architecture*, and the like; all being dependant on ſuch Rules and Proportions which are the Dictates of Nature, and infallibly pleaſe the Imagination; eſpecially in *Architecture*; the Ancients ſo beautifully perform'd their Works they always gave a Pleaſure to the Beholder.

These Obſervations will be uſeful to you in the Choice of Deſigns, or in the Directions of the Performance of them: Firſt, that the internal Parts may be proportion'd to the external; that is, a ſmall Building ſhould have little Rooms; in a larger, the Rooms muſt be more ſpacious; having an Analogy to the Magnitude of the Fabrick; and their Heights muſt have a Proportion, regulated by ſome of the preceding Rules. *Palladio* has obſerv'd, that there are ſeven beautiful Proportions, and has likewiſe pointed them out, *viz.* A Circle or a Square, or the Diagonal of a Square, or a Square and one third, or a Square and half, a Square and two thirds, or laſtly, two Squares; and has given a Section of each of thoſe Proportions, which though different from the Rules I have laid down, are agreeing in the Number Seven, and that the Length of no Room exceed a Double Cube, or what he there terms two Squares; and, with one Obſervation worthy your Notice, that the nearer a Room (in particular a Hall) is to a Square, the more uniform and commodious they will be: Though he, perhaps, conceals the Reaſon why ſuch Proportions affect the Eye and Imagination, which are only becauſe they are ſuch which Nature herſelf dictates, Uniſon, being always Harmony.

It will be neceſſary in Country Seats, to have each Side of the Entrance or Middle of the Building alike; not only to preſerve a Harmony in the ſeveral Parts, but as the Walls are anſwerable to each other, they will be equally preſs'd by the Roof; and if the Building is ſo diſpos'd, that more Walls are on one Side than the other, or of different Magnitudes, then the Roof preſſing, or being not ſo eaſily ſupported by the weakeſt Side, there will be Gaps and Chaſms, occaſion'd by greater Settlements, which will render the Building unfirm and incommodious.

In each Room likewiſe the Piers on one Side ſhould anſwer, and be equal to the other Side of the Middle of it, thoſe on one Side the Chimney ſhould be the ſame Magnitude as thoſe on the other, and on the Window Side the ſame Uniformity ſhould be obſerv'd; the Doors ſhould anſwer one another, either by real or falſe; and a Viſta through the Middle of the Building ſhould be always had, and, if poſſible, to each Front; and the Doors of one Room, in a Range of Rooms, ſhould be diſpos'd to anſwer each other in a Line, to preſerve a Grandeur proportion'd to the Magnitude of the Building.

In a ſpacious Building, as ſome principal Rooms will be wanting, ſmaller will doubtleſs occur; but theſe muſt lie contiguous to each other, not interrupting the State and Magnificence of the others; and by making Mezonina's or half Stories, will render thoſe little Rooms of an elegant Proportion, which by placing near the Back-Stairs, or more convenient Paſſage, become Lodging-Rooms, which are much warmer than thoſe ſtately ſpacious Rooms, having leſs Inlets of Air, and are ſooner heated by Fewel. There are Rules likewiſe for proportioning of Light, according to the Magnitude of the Room, by which any Room may be illuminated more or leſs, according to the Uſes of them, and at the ſame time preſerve an external Regularity; which, as it is on an uncommon Baſis, I ſhall explain it to you as well as I conveniently can.

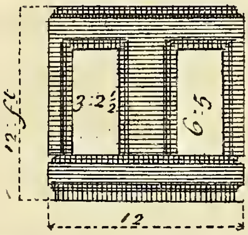
Let the Magnitude of the Room be given, and one of thoſe Proportions I have propos'd to be made uſe of, or any other; multiply the Length and Breath of the Room together, and that Product multiply by the Height, and the Square Root of that Sum will be the Area or ſuperficial Content in Feet, *&c.* of Light requir'd.

Example, Suppoſe a Room (mark'd A.) whoſe Magnitude is the Arithmetical Proportion of 5, 4, and 3, and is 20 Foot long, 16 Foot broad, and 12 Foot high, the Cube or Product of its Length, Breadth, and Height, multiplied together, is 3840, the Square Root of which Sum is 62 Foot, if the Height of the Story is 12 Foot, as is before mention'd, divide that 62 Foot into three Windows, each Window will contain 20 Foot 8 Inches of ſuperficial Light, and thoſe will be found to be 3 Foot 2 Inches and one half broad, and 6 Foot 5 Inches high, which are Windows of two Diameters.

Let us now ſuppoſe another Room (mark'd B) on the ſame Range, whoſe Height is 12 Foot, as the preceding Example is, and its Proportion ſhall be the Cube, the Product of that Cube is 1728, and its Root is 41 Foot 4 Inches, or thereabouts; divide that 41 Foot 4 Inches in two Parts for two Windows, and each will be 20 Foot 8 Inches of ſuperficial Light, and thoſe will be two Diameters in Height, and the Magnitude the ſame as the preceding Room.

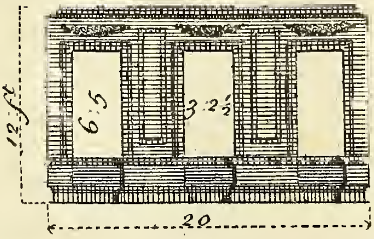
For

B


12: f$^{t}$
3:2½
6:5
12

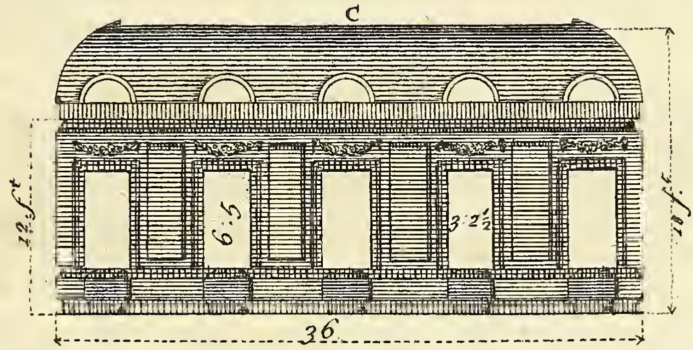
Breadth. 12. f$^{t}$

A


12: f$^{t}$
6:5
3:2½
20

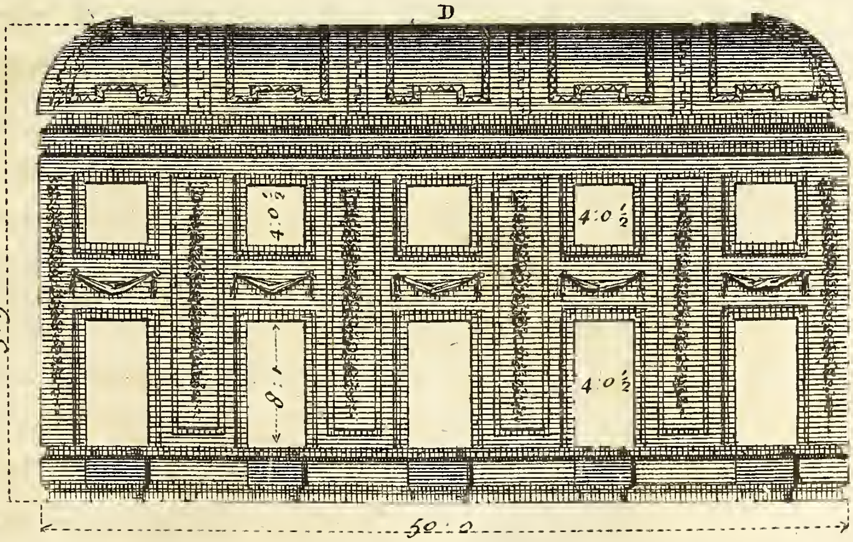
Breadth 16. f$^{t}$

C


12 f$^{t}$
6:5
3:2½
18 f$^{t}$
36

Breadth. 24. f$^{t}$

D


30 f$^{t}$
4:0½
4:0½
8:1
4:0½
50:0

Breadth 40 feet

Robertus Morris inv: et delin: Toms ſculp.

For Example ſake I will only ſuppoſe one more Room (mark'd C.) upon the ſame Range, and 12 Foot in Height, whoſe Proportion ſhall be the Arithmetical of 3, 2, and 1, that is, its Height being 12 Foot, the Breadth will be 24, and Length 36 Foot, the Product of thoſe Numbers multiplied together will be 10368, and its Root 101 Foot 8 Inches, or thereabouts; divide this Room into five Windows, each Window will have 20 Foot 4 Inches ſuperficial Light, and the Magnitude will be near or equal to the others; and if the Proportion be 6, 4, and 3, and cov'd, the Light is the ſame.

There is but one Objection to this Rule to make it univerſal for all kinds of proportion'd Rooms on the ſame Floor, and that is, the Square Root doth not always happen to be exact enough for to make them alike; but as the Variation will be ſo ſmall, it may be made uſe of; and if the Area ſomething exceeds the Standard of the principal Rooms, that Room may be converted to a Uſe which requires more than Standard Light, and the Neceſſities of Families ſometimes require it.— But however, the Rule will ſerve for the Purpoſe near enough for any Practice.

If you extend the Rule to larger Rooms, the ſame Methods will be preſerv'd, even if their Height be continued through two Stories, if the upper Windows be made ſquare, and to have two Tier of Windows. Let us ſuppoſe the Room (mark'd D.) with two Tier of Windows in Height, to be 50 Foot long, 40 Foot wide, and 30 Foot high, the Arithmetical Proportion of 5, 4, and 3, the Product of thoſe Numbers multiplied together will be 60000, the Square Root of which Sum is 245 ſuperficial Feet; divide that Sum for the Tier of Windows into three Parts, or take one third of it, and that makes the Attick or Square Window 81 Foot 8 Inches ſuperficial Light, divide this into five Windows, and they are four Foot and half an Inch Square, and the five lower Windows conſiſting of 163 Foot 4 Inches ſuperficial Light, being what remains out of the 245 Foot the Root, each of theſe Windows is 4 Foot half an Inch by 8 Foot 1 Inch, or two Diameters, which 245 Foot, the whole Sum of the

Square Root of the Room, will ſufficiently illuminate the ſame.

I HAVE been the more prolix in this Deſcription, becauſe the giving a proper Light to a Room by a Rule, has been, perhaps, the leaſt thought of in the Diſpoſition of the internal Part of a Building; and as I eſteem it a neceſſary Part to be underſtood, I thought it incumbent on me to form ſome Rule, whereby the Knowledge of it might be attain'd.

STAIR-CASES are the next Part of internal Deſigning, and require Judment in the Diſpoſal; they muſt be ſo plac'd as to be well illuminated, contiguous to the Center of the Building, or elſe more than one in Number; and ſo plac'd, that each Room may be near them, and have an eaſy Acceſs to them, without incommoding any of the reſt of the Rooms: Their *Going* ſhould be large, the *Tread* broad, and the Riſe eaſy for principal Stairs; for Back Stairs, leſs of each is requir'd, being more for ſervile Uſes than Grandeur; and they ſhould be ſo plac'd as to be more remote from the Eye, and in the more common Apartments of the Building, either as they lead to Servants Lodging-Rooms, or are the Acceſs to the uſeful Apartments in the lower Offices of the Building.

THEIR Form is various, as Rooms are; but one Obſervation is neceſſary, which is, that the Flights be not too long, and to have no Winders in principal Stair-caſes: The firſt give an Uneaſineſs, and ſoon weary the Aſcender, for want of half-Paces to reſt on; and the latter is very incommodious, if by Chance two Perſons meet on a Stair-caſe with Winders, and the Going is not more than ordinarily large, their Paſſage is incommoded, and often proves ill-convenient.

BUILDINGS in Town require *Contrivance* more for Convenience than Grandeur; the Rooms cannot be ſo ſpacious as thoſe in the Country, but however Regularity is to be obſerv'd; the Chambers or Lodging-Rooms, require to be as far from the Noiſe and Tumult of the Street as conveniently can be plac'd, and ſo near a Stair-caſe, that if any Accident by Fire (which too frequently) happens, an eaſy Acceſs may be had to it; for which Purpoſe all Back Stair-caſes in Town-Houſes, as they generally are carried from the lower Offices to the Roof, ſhould be of Stone, and the Walls of them Stucco, that no Danger might prevent the Safety of getting down them, to avoid the Fury of the Flames; and ſuch which are plac'd about the Middle of the Building and illuminated by a Sky-light, are by far the moſt convenient.

As in Town-Houſes, ſo in the Country, the Kitchen ſhould be remote from the Houſe; the *Steams* ariſing from thence are offenſive, and the extream Heat of it often renders the Apartment over it very irkſome to bear: The ſervile Offices are beſt always to be ſome Diſtance from the main Building, the Houſe will be leſs troubled with Noiſe, and leſs incumber'd with ſuch Things which are requir'd to ſerve the Purpoſes of a Family.

OFFICES to Buildings are variouſly ſituated: Some are continu'd in a Range with the Front of the Fabrick, ſome join them by a circular Colonade, and others are environ'd to the principal Front: As *Burlington-*

*Burlington-Houſe*, and *Montague-Houſe* in *Great-Ruſſel-Street*. A Pattern of a circular Colonade is *Buckingham-Houſe*, and that which the late unhappy Conflagration deſtroyed of the Duke of *Devonſhire*'s. Theſe, indeed, are under ſome Reſtriction for want of Room: but I think it not adviſeable to contract or encloſe a regular Front, but rather leave the Opening ſpacious and clear; an Inconvenience attends it likewiſe, that is, the Smoke of thoſe environing Offices often proves offenſive to the Houſe.

In the Country, where Room is to be had, the *Architect* has Scope for Fancy, and the Offices ſhould be ſomething analogous to the Front of the Houſe, always obſerving to make them plainer; and where Decoration and Dreſs adorn a Front, in the Offices it ſhould be uſed very ſparingly.

If the Offices are continued long in a Range with the Front, they ſhould fall gradually away, by Breakings, and terminate, as it were in a Point. I can beſt deſcribe this beautiful Manner of Deſigning, by a Building erected near the Town, and is (I think) the Deſign of *Inigo*

*Inigo Jones*, and that is *Chelſea-College*; to the North Front there you find that eaſy declining of the Range, like a beautiful Landſkip diminiſhing from the Eye by a gradual Shade; perhaps here and there a little Hill ariſing, from thence ſinking into a Lawn, which by alternate Changes are extreamly pleaſing: There is nothing wanting to make that a perfect Deſign, *but* to have made the middle Part a Portico, to be brought out as far as the Steps.

PORTICO's, or *Porches*, undoubtedly give a Grace and *Nobleneſs* to a Deſign; ſomething Majeſtick ſtrikes the Imagination, if they are duly proportion'd. It is to be obſerv'd, that they ſhould never be leſs than four Columns, nor more than eight to them; except at the Angle of it a Pilaſter and Column are join'd at their Plinths, and the Intercolumniation be of the *Corinthian* or Proportion *Syſtylos*,——and always are ſuppos'd to ſupport the Roof, as in the Manner of the Ancients, ſo juſtly imitated in the Front of *Covent-Garden* Church, the Deſign of *Inigo Jones*.

PEDIMENTS are generally, and indeed the moſt beautiful Manner of covering a Portico; as St. *Martin*'s Church, and St. *George*'s *Hanover-Square*: And, indeed, moſt of the antient Temples of *Greece* had their Entrances in the ſame Manner; and many Noble Palaces ſtill are adorn'd with them. The Proportions are ſo well known, I ſhall not trouble you now with a Repetition of them.

WHEN we conſider the Dreſs of a Fabrick, either in the internal or external Part, it is there the *Architect* is to ſhew his Skill; he is to adapt that to the Magnitude, or Situation of the Building, always rather below Profuſeneſs, than to attempt it. Dreſs is the moſt expenſive Part, either within Side or without; but wherever Enrichments are applied, they ſhould be few, and more particularly without Side. If Carving is to be introduc'd to Ornaments, it ſhould be in ſuch Places as are defended from the Weather, as in Cornices, *&c.* for where Snow or Rain can lodge in it, they are of a decaying Principle, and Time will ſoon waſte away thoſe tender

der Parts, the Beauty of it will fade ſoon; for the Parts where the Rain lodges will receive Duſt, and when it overflows, that will ſtain and ſully it; which Inconveniencies would be prevented, were the Members entirely plain.

STONE will endure long, but among thoſe we have, *Portland* is the moſt beautiful as well as durable; and if a Front is not wholly of Stone, the Dreſs to Windows, Strings, Faſcia's, Cornices, *&c.* will be very agreeable; but of all things Stucco, or Finiſhing, to external Uſes, are to be avoided; a few Years deſtroys it, and its Colour ſoon fades; if it be painted, it will prove a continual Expence, and the Incidents of the Seaſons will even then deſtroy it in a little Time.

IN Buildings of Brickwork, a Plinth of Stone is requiſite, though no Dreſs is applied to the other Parts. Stone is not only more durable, but as they are in large Pieces for the Foundation, they will be a better Tie, and not ſo eaſily cruſh'd by the Weight above, to occaſion a Settlement. The Rains which fall near a Foundation from a Cornice, *&c.*

often penetrate into the Joints of Brickwork, and by that Means weaken it, and if requir'd to be clean'd, cannot be ſo well done as Stone; but then it may be obſerv'd, that where-ever it be uſed, it will be an Enlargement of Expence.

AN *Architect* has, undoubtedly, many Difficulties to meet with in the erecting a Building; want of Materials, of proper Workmen, and too often of Subſtance; whereby his Skill in the Execution is requir'd to ſupply ſuch Defect, by adapting Things neceſſary in the Room of thoſe which would be undoubtedly more uſeful: But then the greateſt Part of his Judgment will yet appear, and that is in the Order, Regularity, and Convenience of the Fabrick; and if a ſkilful Deſign be perform'd with Brick inſtead of Marble, it will have the ſame Beauty, the Proportion muſt infallibly pleaſe.

A PLAIN regular Front, without Dreſs or Ornament, if juſtly proportion'd will better ſatisfy the Taſte of the Judicious, and more immediately ſtrike the Eye, than all the gay Dreſs and Decoration of an ill-proportion'd Deſign:

There is a kind of ſympathizing Pleaſure from Nature, when a juſt Proportion is obſerv'd *in the Performance* of a Building.

INTERNAL and external Dreſs require Rules to be applied to them, and even the minuteſt Parts require a certain Proportion; there is a Way which both Art and Nature have pav'd for us, and when we deviate from that Path, we wander in Uncertainties. If we apply our Reaſon to things, we ſhall ſoon find it true, that every thing requires to be perform'd by infallible Rules: This is what I have all along aim'd at in theſe *Lectures* as to Generals, and if in particular Things it be attempted, the ſame univerſal Law of Nature holds good; I ſhall therefore in my next *Lecture* treat more particularly of Decoration and Dreſs, internal and external.

IT is impoſſible by Words to explain things to your entire Satisfaction; but as far as the Nature of ſuch Definitions will extend by verbal Explanation, I ſhall endeavour at; hoping you will conſider how defective ſuch Deſcriptions are, compar'd to a Deſign delineated on

Paper; and when you are pleas'd to give Allowance for ſuch Defect, I ſhall eſteem it a Favour, and ſhall communicate any thing to you worthy your Notice: In the mean time I am,

*Gentlemen,*

*Yours.*

Read to the Society, *March* 11, 173$\frac{3}{4}$.

## LECTURE VIII.

GENTLEMEN,

MY preceding Lectures conſiſteth chiefly of a Deſcription of Proportions to be uſed in *Buildings*, in which the external Part as well as the internal, are confined to ſtated *Rules*. I have endeavoured ſo to explain thoſe Rules, to make them uſeful in the *Practice* as well as *Theory* of all kinds of Building, and with as much *Brevity* as ſuch Definitions would admit. There remains now to compleat my Deſign, only a proper Diſpoſition and Proportion of *Ornaments*, to be apply'd to deck the Fabrick; and indeed, this is the moſt difficult Part of *Architecture*, ſo to diſpoſe of Ornaments as to fill up uſeleſs Vacuities, and to give a proper Alleviation to the Eye as it paſſes from Space to Space, preſerving an Analogy through the keeping of the whole Deſign, and ſo filling and decorating the Vacancies, as not to crowd and incumber the Parts with ſuperfluous Dreſs or Ornament.

Beauty and *Proportion* are inſeparable, for which Reaſon Beauty is always center'd in Proportion, and Proportion is ever beautiful; therefore, in Nature there are ſtated Laws, whereby they are form'd: But when we *deviate* from Nature, the farther we recede, the more remote we are from Elegance, becauſe Nature is conſtant and invariable in her Production, and admits of nothing to make her pleaſing or beautiful but *Proportion* and *Harmony*.

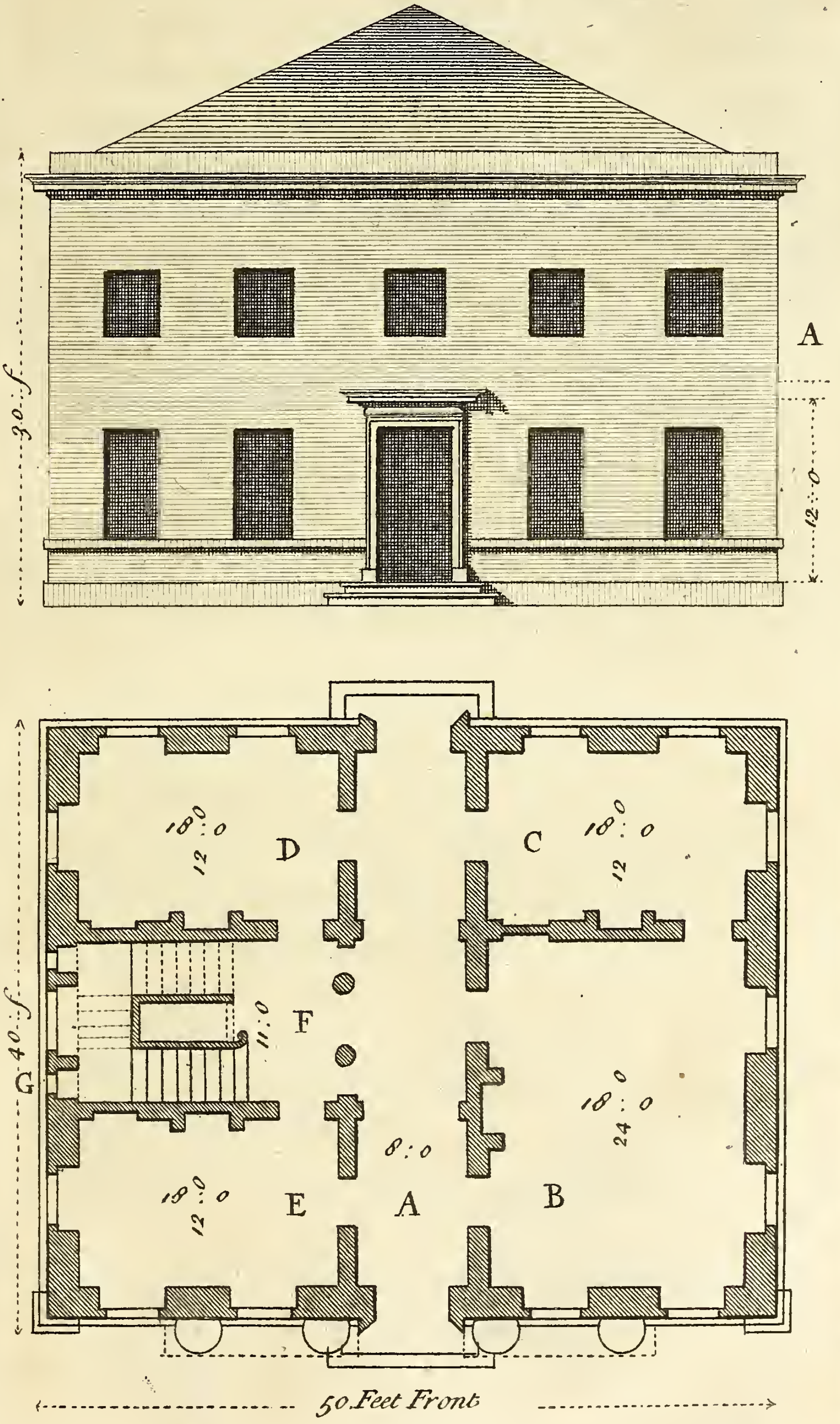
In Architecture, therefore Rules are to be made uſe of, which when obſerved by an *Architect*, his Fancy, or Genius, will give a proper Contraſt to a Deſign. A Statue may have an elegant Proportion without Dreſs, and be in Nature juſt, yet Nudities are not ſo pleaſing to the Eye, as a Statue in Cloathing, after the antique Dreſs of Drapery, and even in Dreſs, the fine Proportion of the Statue may be preſerved; the tender Softneſs of a *Venus*, or the muſcular Robuſtneſs of a *Mars* or a *Hercules*, may be ſhewn through the Drapery in proper Parts; but then a fine proportion'd *Statue* may have a Superfluity of Dreſs, or be illy plac'd, or want *Elegance* in Deſign, which deſtroys even the Beauty of the Statue; ſo in Buildings, a plain juſt proportion'd Deſign will always pleaſe the judicious Eye, but a proper Diſpoſition of *proportioned Ornaments* adds to it a pleaſing Gracefulneſs, and renders it abundantly more agreeable, where the Parts which deck the Fabrick, are only juſt what are neceſſary, without *Superfluity* or *Want*.

OUR modern Architects have made Ornament or Dreſs, the principal Part of their Performance, and have given Decoration to ill-proportion'd Fabricks, and indeed, Superfluity is generally the thing to attract the Eye; they garniſh the in-elegant Deſign, to attone for the Diſproportion of the Parts, and croud and fill the Spaces by ſome gay Dreſs, to conceal the want of Proportion; which is only a kind of unmeaning Attempt at Elegance, which our greateſt Architects are not exempt from, tho' in other Places have ſhewn a refin'd

Elegance of Taſte worthy Imitation, Examples of the former Claſs are too numerous, and the latter are more envied, perhaps, than admired; which makes ſuch Examples leſs known by young Students in Architecture, to attract their Attention.

THAT the Rules which I have laid down may be of uſe to apply to Buildings, I have choſe a Deſign whoſe Proportions are the ſame which I have made uſe of in the internal Parts of a Building, as is ſhewn in the Sections Plate the IId, p. 105, in which is the ſquare and arithmetical Proportion 5, 4 and 3, which I have choſe for the Plan and Profile before us, Plate the IIId. The Plan is 50 Feet Front, 40 Feet deep, and the Height of the Building is 30 Feet from the ſurface of the Ground, to the top of the Blocking Courſe.

AS the Deſign is ſmall, I have divided the internal Parts in proportion to the Magnitude of the Deſign, as may be ſeen by the Plan which is of the principal Floor. I propoſe the Houſe to ſtand in a *Foſſee*, and ſuch Offices for the uſe of the Houſe to be


A
30 f
12 : 0
18 : 0
12
D
C
18 : 0
12
F
11 : 0
40 f
G
18 : 0
24
8 : 0
18 : 0
12
E
A
B
50 Feet Front

*Robertus Morris inv: et delin.* *Toms ſculp.t*

be below the Plinth, as ſhewn in the Profile above it; the Entrance to thoſe Offices being propos'd at the End, mark'd G —— by the Stair-caſe: As thoſe Offices are principally for Servants, I have omitted the Plan. On the principal Floor are four Rooms, three of which have the Proportion Seſquialter, or the Cube and half, propoſing all that Floor to be 12 Feet high in the Clear, in which the Rooms mark'd C, D, E, are 18 Feet long, 12 Feet wide, and 12 Feet high, which is the Cube and half.

The principal Room mark'd B, I have given the Proportion of 4, 3, and 2, it being 24 Feet long, 18 Feet wide, and 12 Feet high. The Front Walls are two Bricks thick, or one Foot ſix Inches each; which makes

| | F. | I. | |
|---|---|---|---|
| The two Walls | 3 | 0 | |
| The Room mark'd A, is | 24 | 0 | Length. |
| The Partition is thick | 1 | 0 | |
| The Room C, is width | 12 | 0 | |
| Makes Feet | 40 | 0 | which is the Depth of the Building. |

THE Front being 50 Feet, I propoſe the end Walls one Foot ten each, which is two Bricks and half;

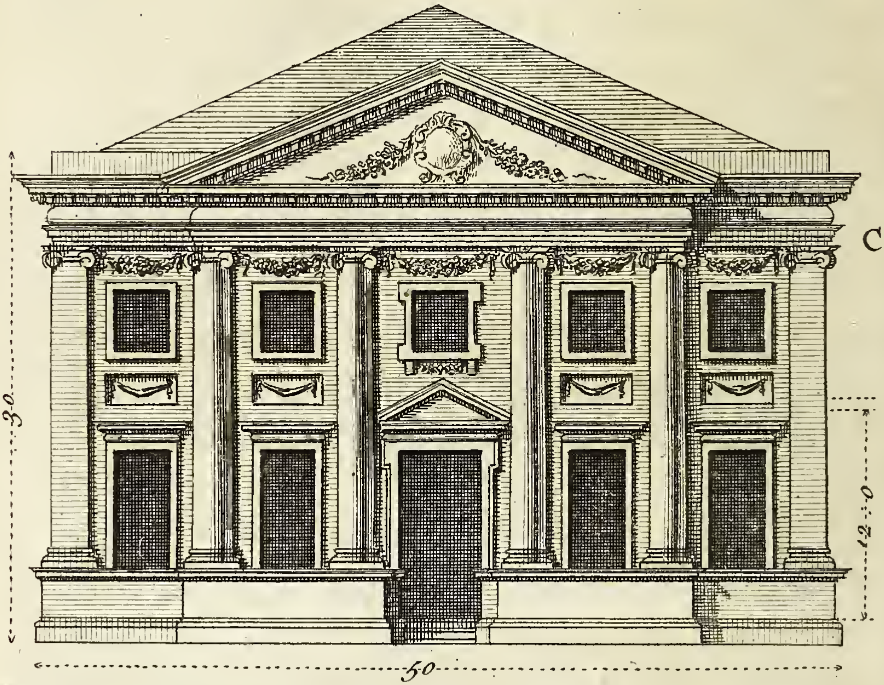
| | F. | I. | |
|---|---|---|---|
| Both making | 3 | 8 | |
| The Room B, is | 18 | 0 | Breadth |
| The Wall next Paſſage A, | 1 | 2 | Thick |
| The Paſſage mark'd A, is in the Clear | 8 | 0 | Wide |
| The middle Wall next the Stairs, and Rooms marked C, D, and E, is | 1 | 2 | Thick |
| The Rooms mark'd E, D, | 18 | 0 | Long |
| Makes | 50 | 0 | Feet the Front of the Building. |

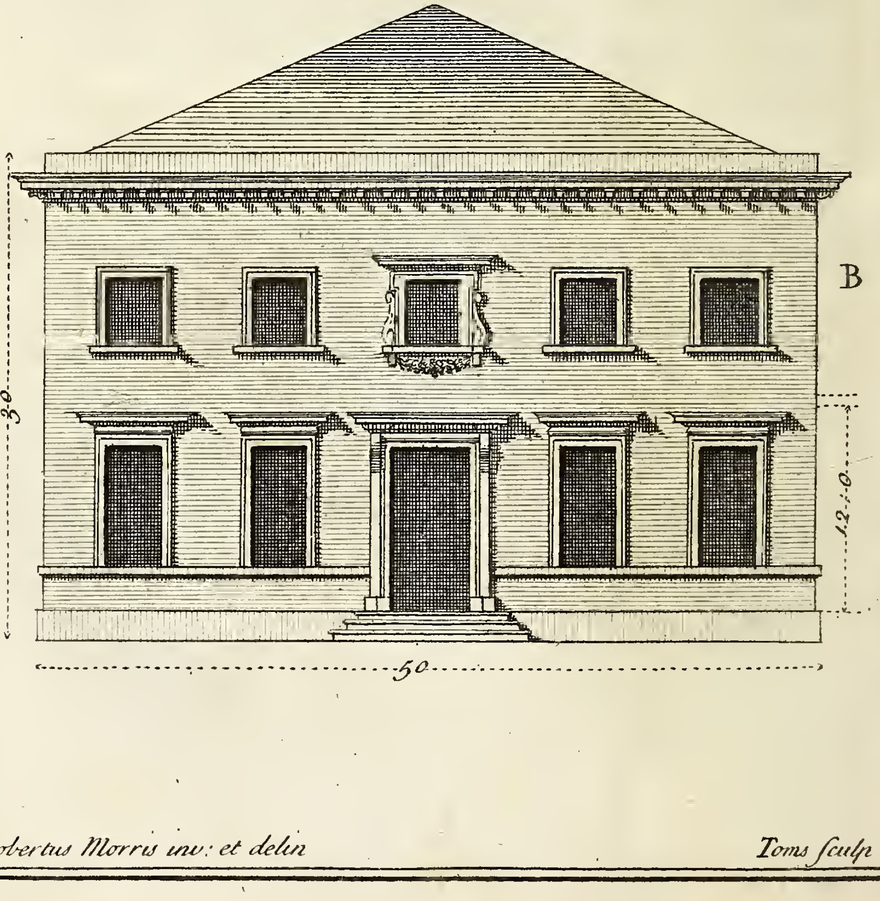
IN the Plan I have endeavour'd to preſerve a ſtrict Uniformity and Convenience; each Room I have illuminated with a proper Light, without changing the Regularity of the Front; and at the End G, I have made a *Venetian* Window the whole opening of the Stairs, which will be an Illumination to the Paſſage mark'd A. At the Landing-Place F, I have made a Screen of Columns to the Stairs, which will form a Gala Gallery in the Attick Story; and each Chamber be convenient and private, by making Cloſets over the Paſſage. The Attick Story will be the ſame Plan, without altering the Proportion of the Rooms; and as they are intended for Lodgings, will be ſufficiently lighted.

It may be further obſerved, that each Room has a Communication to the Stairs, and to each other, without incommoding any, and renders them private as well as regularly proportioned. I would propoſe as to internal finiſhing, to have the lower Offices, except one Room, all plaiſter'd, or done with Stucco, and thoſe Rooms pav'd with Tile or Stone, as can be moſt conveniently had in the Country, for which this is deſigned. The Stairs likewiſe I would have of Stone for the ſafety of the Inhabitant in caſe of Fire. The Walls of the principal Floor ſhould be wainſcotted with Deal, and the Cornices plaiſter'd and enrich'd in proportion to the external Dreſs of the Deſign; boarding the Floors with the beſt ſort of Deal, and enriching the Ceilings, eſpecially in the Room mark'd B, in which the Chimney-piece, the

Dreſs, and Ornaments to the Doors and Windows, being all to be ſuited to the Elegance of the external Part, which is to be the Guide to finiſh the internal.

The Profile mark'd A, I have divided into ſuch proportion'd Windows and Piers, that gives an equal Margint round like the running of a Frett, which always give a Beauty to the moſt plain and ſimple Deſigns; and it is this, when rightly applied, that makes Dreſs and Decoration pleaſing, where it is uſed to preſerve an equal Space from Vacuity to Vacuity. To contract a large plain Space, or to alleviate the Eye in paſſing from one part of the Deſign to the other, which by breaking into various Parts anſwers the End of enriching a Building. As the Profile before us is compoſed of the moſt natural Numbers, to give Pleaſure to the Eye, you may ſee Harmony even in its Plainneſs. But if the Situation, or the Inhabitant or Owner require more *Vivacity* and *Gaiety*, the front B Plate the 4th, will be a proper finiſhing; and here, the Windows, Piers, Heights, and every thing are the ſame as that mark'd


C


B

*Robertus Morris inv: et delin* *Toms ſculp$^t$*

(mark'd A.) only ſuppoſing the Ornaments lain on it without altering any part of the *Diſpoſition* or *Magnitude*; yet the Margints or Spaces are preſerved, and a proper keeping to the Deſign.

IF the moſt elegant Dreſs is required, let the Profile C, be ſuppoſed to be the ſame with A in Magnitude, *&c.* as is before obſerved; only laying on the Enrichments to adorn the *Fabrick*, the Spaces are preſerved by breaking the Diſtances with Feſtoons or Drapery, *&c.* which give a Gracefulneſs and well proportion'd Symmetry to the whole. It is eaſy to ſee the ſame Graces in the beautiful Statue ornamented with proper Drapery; and you may trace the plain Profile through all the Elegancy of Architecture, where a juſt Proportion has been us'd in the Parts which compoſe the Deſign; and as in a Statue the Muſcles, Nerves, *&c.* have a juſt propoition to the Magnitude of the whole; ſo, in a *well proportioned Building*, every Part ſhould be conſider'd, as it relates to the compleating the Deſign, to make it *ſtrong*, *beautiful*, and *convenient*.

THE minuter Ornaments made uſe of to adorn Doors, Windows, *&c.* have ſuch Proportions already aſſign'd them, that no Addition can be made to beautify them; only it muſt be remembered the fewer Diviſions they conſiſt of, the more elegant they will appear; and when Mouldings are uſed at any conſiderable diſtance from the Eye, they ſhould be few in number and of an *ample Relievo*; for where they are ſmall, a redundancy of Parts ſcatters the Angles of Sight into a Multitude of Rays crowded together, and renders the Object we view a perfect Confuſion.

It has been the juſt Obſervation of an *ingenious* Friend, that in Dreſs and Decoration the *Ornaments* which deck the Deſign ſhould be natural, and all the Parts ſhould have an *Analogy* one to the other: As ſuppoſe in particular, the ornamenting a *Ceiling* of a Room, the Beams which are enrich'd ſhould be lain over *Piers*, the Pannels anſwer Doors or Windows, and the Margints be preſerved the ſame as the *Sides* of the Room; for in ſtanding on one *Side* of a Room, the Ceiling of the oppoſite *Side* ſhould anſwer the Diviſion of the Walls, that they might appear in one *Line*. Few Perſons have ſtrictly obſerv'd this Method; but as a Proof of its Beauty when perform'd, obſerve the *Ceiling* of the Banqueting-houſe at *Whitehall*, where it is ſtrictly executed; and compare it with the *Ceiling* of the new Building of St. *Bartholomew*'s Hoſpital, and you will yourſelves readily judge the neceſſity of obſerving thoſe Methods in dividing the Compartments of a Deſign, and what Effect they have where Fancy only has directed the Deſigner in his Choice of Decoration.

GENTLEMEN, It has been my chief Deſign in theſe Lectures to lay down Rules for moſt of the *principal Branches* of *Architecture*; and if I have any where deviated from the common Path, your own Judgments will guide you to the propereſt Choice. I do not lay them down for abſolute, but if they are *practicable* they may be *uſeful*. Our Judgments vary much in the moſt common Opinions; and if there ſhould be different Sentiments about the improvement and refining ſo noble and extenſive an *Art* as *Architecture*, yet it is certain, where RULES are the Guide to our Judgment, ſuch Opinions are built upon the moſt ſolid and laſting Foundation.

When I conſider *Architecture* in its utmoſt Extent, and how many different Deſigns may be compos'd from thoſe few Rules which I have laid down for the *general* Proportions, it always gives me an agreeable Pleaſure in the Reflection, to ſee from one ſmall Fabrick new Embelliſhments, and riſing to noble Buildings and Palaces; and all performed by the ſame Rules, the ſame analogous Proportions, muſt be a pleaſing Theme to employ the Thoughts of a ſpeculative Genius. When I conſider how many ſucceſſive Ages of Time have roll'd away ſince the Art was perfected, and how the noble Actions of eminent Perſons have been tranſmitted to us by *publick Buildings* and *monumental Ornaments*, and how future Ages may view the Works of our preſent Worthies in their *Palaces* and *Seats* of Retirement: When I am led to ſuch Contemplations, it always gives me an unſpeakable Satisfaction.

To acquire a juſt Taſte of Deſigning, muſt be to be well acquainted with the Deſigns of the Antients, to traverſe the antique Buildings of *Greece* and *Rome*, and compare them with the Works of *Serlio*,

*Serlio*, *Palladio*, and others; and ſee which is moſt agreeable to Rule, or moſt affects our Paſſions in the Review; where Nature is moſt apparent, there undoubtedly *Harmony* reſides, whether the Deſign be plain and conſiſt of but few Parts, or whether it be enrich'd with Ornament or Decoration; if RULES or NATURE have been applied, thoſe are the Examples worthy our Choice.

COMPARE the Portico of St. *Martin*'s Church with ſome of the antient Temples of *Greece*, in the Works of *Vitruvius*, or the *Pantheon* at *Rome*, and there you will diſcover true elegance of Deſign, and a happy refinement of Taſte. To ſee Buildings of more than 2000 Years diſtance in Date be thought worthy of Imitation, ſhews not only the Excellency of Architecture in thoſe Times, but the Genius of this preſent Age, who can diveſt themſelves of modern Error, to trace the Paths of Antiquity. The Antients were generally grave and ſolemn in the decoration of their Temples, but their *Theatres* and *Palaces* had Gaiety and Dreſs to enliven the Deſign, and were never ſparing in Ornament, ſo it did not border upon *Profuſeneſs*.

ORNAMENTS certainly give a noble Contraſt to a Deſign, where they are appropriated to the Purpoſes of the Building; but it muſt be conſider'd, Feſtoons of Fruits and Flowers would illy become the Entrance of a Priſon, or froſted ruſtick Work the Approach of a Palace: Propriety in Ornaments is therefore a grand part of Deſigning, and where it is juſtly introduc'd with Elegance of Taſte in *Diſpoſition* and *Proportion*, ſhews an Accompliſhment in Judgment, which is requiſite for a compleat ARCHITECT.

As I have now compleated the general Proportions, it may be expected that I ſhould proceed to treat of the particular Magnitude and Form of Ornaments which deck and embelliſh the *Fabrick*; but as that will be as extenſive in Deſcription, as what I have hitherto deſcrib'd to you in my Seven preceding Diſcourſes, I ſhall make the Orders and Ornaments of *Architecture* the Subject of future Lectures, when Opportunity gives me leave to trace a Subject ſo agreeable, and of ſo univerſal extent as ARCHITECTURE.

In the mean time I remain,

GENELEMEN,

*Yours, &c.*

# LECTURES
# ON
# *ARCHITECTURE.*
Conſiſting of
# RULES
Founded upon
HARMONICK and ARITHMETICAL Proportions *in* Building, applicable to various SITUATIONS.

DESIGN'D
As an agreeable *Entertainment* for
GENTLEMEN:
BUT
More *Particularly Uſeful*, to all who make ARCHITECTURE, or the *Polite Arts* their Study.

## Part the SECOND.

Read to a SOCIETY eſtabliſhed for the Improvement of ARTS and SCIENCES, and Explain'd by Examples on 13 Copper-plates; with the Proportions apply'd to Practice.

### By ROBERT MORRIS.

*LONDON:*
Printed for the AUTHOR, 1736. and Sold by *J. Brindley*, in *New Bond-Street*; *J. Wilcox*, againſt the New Church in the *Strand*; and *J. Millan*, near the Admiralty Office.
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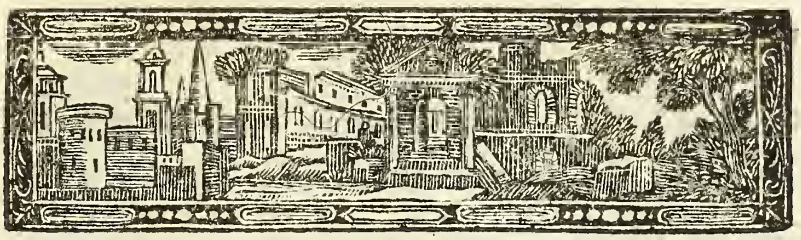


TO

# *ROGER MORRIS*, Eſq; Architect, &*c*.

*SIR*,

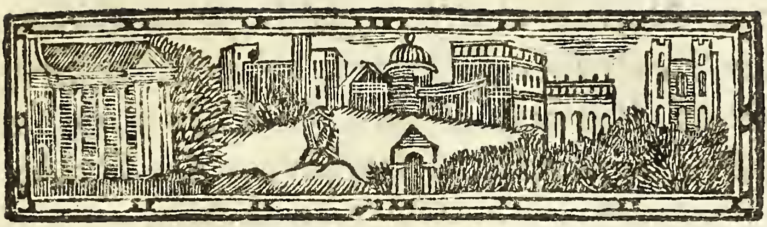
IF our *Affinity* or *Friendſhip* are *Motives* to induce me to *addreſs* this Second Part of my *Lectures* to YOU, I am more immediately obliged to it, from the ERUDITION I have received in your *Service*. From thence aroſe the *Ideas* of the following Deſigns, which I have interſperſed in this abſtracted Eſſay —— If I have any where produced *ſomething* that may be free from SEVERE Cenſure, they are ſuch Parts only, where I have taken the *moſt* pains to imitate Your *Manner* of Deſigning, in the *Practice* as well as *Theory* of the ART. Where the *Imperfections* and *Blemiſhes* of TASTE are more viſible, THOSE are owing to Negligence, the want of juſtly adhering to *Yours*, or, perhaps, a ſingularity of Opinion, a *Fault* which I find a Difficulty to ſurmount.

WHERE ARCHITECURE, among other Topicks *engroſs* the Converſation of the *Beau-Monde*, YOUR Productions muſt ſometimes be the *Theme*; *therefore*, that theſe *petit Sallies* of *my* Imagination may be known by the generality of Mankind, from thoſe *nobler* Patterns You have produced, I ſhelter myſelf under the *Sanction* of YOUR NAME; *Compariſon* will ſoon didinguiſh the great Difference between *Eſſays* in *Theory*, and *Practical* Demonſtrations.

BE pleas'd, Sir, to *receive this* Amuſement of a few vacant Hours, as an Acknowledgment of the ſincere *Duty* and *Obligation* I lie under to YOU. I ſhall ſtill eſteem myſelf happy in the Continuance of Your *Friendſhip*, and in ſubſcribing myſelf, with all due Reſpect,

*Your Loving* Kinſman,
*and Humble* Servant,

Robert Morris.



# PREFACE.

I *Think it neceſſary to ſay ſomething of this Second Part of my Lectures, as they conſiſt chiefly of Demonſtrations to the Firſt;* thoſe *are the Baſis on which the ſeveral Deſigns of* theſe *are erected. It may be obſerv'd, I have by Examples prov'd the Rules practicable both by internal and external Magnitudes. Verbal Explanations of the minute Parts of* Building *I think unneceſſary, ſuppoſing the Reader qualified to comprehend the Proportions of the Orders, and the ſeveral Parts of the* Orthography *and* Ichnography *of the* Building.

SITUATION *has been my next Care, and in this I have been vigilant to appropriate my Deſign to the imaginary Spot. If I have been poetick in Deſcription, the Remarks are only from ſuch Situations which I have frequently taken* *from* Nature *it ſelf, and I eſteem Situation ſo extenſive a Branch of Architecture, that no Building ſhould be deſign'd to be erected, without firſt conſidering the Extent of* Proſpect, Hills, Vales, &c. *which expand or encircle it; its* Avenues, Paſtures *and* Waters; *all which furniſh the* ARCHITECT *with proper Ideas, and the* Modus *muſt be ſhifted from one Scene to another, as Neceſſity requires.*

THESE *Lectures, therefore, are rather a brief Explanation of the Art of Deſigning, and may, perhaps, contain ſome Hints not unuſeful to our greateſt Artiſts; few have ſo extenſively deſcrib'd Situation, and a proper Application of Deſigns to it, as may be found in this abſtracted* Eſſay, *in which I have attempted to lay a Foundation to an* ART *which muſt infallibly be uſeful, being eſtabliſh'd on ſo firm a Baſis as* Rules *and* Proportion. *I have been an Eye-witneſs of ſuch an infinite Number of ill-appropriated, as well as diſproportion'd Deſigns;* Ruſticity *in the room of* Elegance, *and* Gaiety *where* Plainneſs *and* Simplicity *would have been far more pleaſing. I ſay, ſuch frequent* Errata's *led me to conſider ſome ſure unerring* RULES *for appropriating Buildings to the Spot, which the Hints of theſe Examples may prove the Neceſſity of. As I believe few Situ-*

Situations *can be, but what will come under ſome of the* Rules *I have laid down, ſo there are few* Situations *but what I have in ſome meaſure touch'd upon.*

In Situation *I have not carried my Deſcription ſo far as* Shakeſpear, *in that beautiful one of* Dover-Cliff, *in the fourth Act of the Tragedy of King* Lear, *becauſe I imagine ſuch a Spot improper to build on; but if any Attempt of this kind is required, to erect a Fabrick on ſo uncouth a Scene, it ſhould be the Proportion* 3, 2, *and* 1, *without* Decoration *or* Dreſs, *and its Finiſhing the moſt plain and maſſy that could be invented. Such Proſpects generally fill the Eye; but with* Wonder *and* Surprize *we ſurvey the diſtant Scene, it only leaves a kind of mingled dread upon the Mind, and that pleaſing Horror ſoon vaniſheth. Such an extended Ocean is ſtill one continued* Image; *the Seas are only varied from a Storm to a Calm, and ſo* vice verſa *to a Storm again. Whereas the Land affords a vaſt Variety of* Hills, Woods, Shades, Rivers, Corn, Fruits *and* Paſtures. *The* Seaſons *change all theſe; the* Spring *decks it with a varied* Verdure, *a particolour'd* Painting *of* Flowers *and* Bloſſoms. *The* Summer *ſhifts the* Scene *to ripening* Fruits; *the* Meads *and* Paſtures *wear another Face.*

*In* Autumn *the ſpacious Fields are gilded with a Yellow Hew.* ——

——Bedeckt with Beauties in a ſwift Decline,
For hoary *Winter* lops the loaded Bough,
Swells up the Surface of the *gliding Stream*,
Pours out its *Rain*, or whitens all the *Hills*,
Makes *Nature naked* till the Spring returns,
Then, *round* the ſame *Variety* again;
Revolving *Beauties* ev'ry where appear,
And *laſt* reſembled *this* ſucceeding Year.

*I have oft been deceived by a pompous Title to a Book, and which has ſcarce touch'd upon thoſe Parts which in the Title ſeem'd moſt* ſonorous, *therefore I hope the Reader will give himſelf the trouble of a fair peruſal before he paſs Judgment in* Favour *or* Diſlike *to* this; *and when he* candidly *declares his Opinion, he may probably ſay* SOME THINGS *have pleas'd him. This has been* one *Aim of my* Writing, *and whatever is the Fate of it, I am content to be cenſur'd, ſince, as* Cato *obſerves,* THE BEST MAY ERR.

# LECTURE

## The NINTH.

## *PART the Second.*

GENTLEMEN,

THE Reception which the firſt Part of my Lectures on Architecture hath found ſince their Publication, hath in ſome meaſure incourag'd me to continue 'em. Having always propos'd THOSE only to be a preparatory Introduction to the more important Branches of that NOBLE and USEFUL ART, I intend not to omit any thing that can be conducive to the Improvement of it, and which I ſhall attempt in the following Lectures, which I have prepar'd for the enſuing Seaſon for your Entertainment.

TRUE AHCHITECTURE is a *Science* almoſt univerſally talk'd of, and even attempted to be practiſed, but it is not ſo well underſtood; the ſuperficial Part of it is known by many, but ſomething more than that is wanting. The *judicious Architect* hath many Difficulties to meet, many Obſtacles to encounter in the Art of Deſigning; and even *Proportion* it ſelf is not all; there is the Application, the Aſſemblage of thoſe *Proportions* requir'd to be juſtly appropriated to the Uſes of the intended *Fabrick*. The *Orders* of *Architecture* are only the Dreſs and Garniſh of *Building*; *Proportion* is the principal Baſis; and the applying thoſe Proportions to proper Situations, is the moſt noble, the moſt extenſive, and difficult Branch of the Art. Embelliſhments require Skill in their Diſpoſition and Arrangement, and a nice Genius ſo to uſe them, that they may be ſaid to have neither Superfluity, nor Want; the firſt betrays a *Laviſhneſs* of Fancy, the latter a *Meanneſs* of Taſte. But it is to be obſerved, that Situation is in ſome meaſure to direct the Architect how to apply his Ornaments; making Art, as it were, an Handmaid to Nature, by appropriating them to the Spot on which the Fabrick is to be erected.

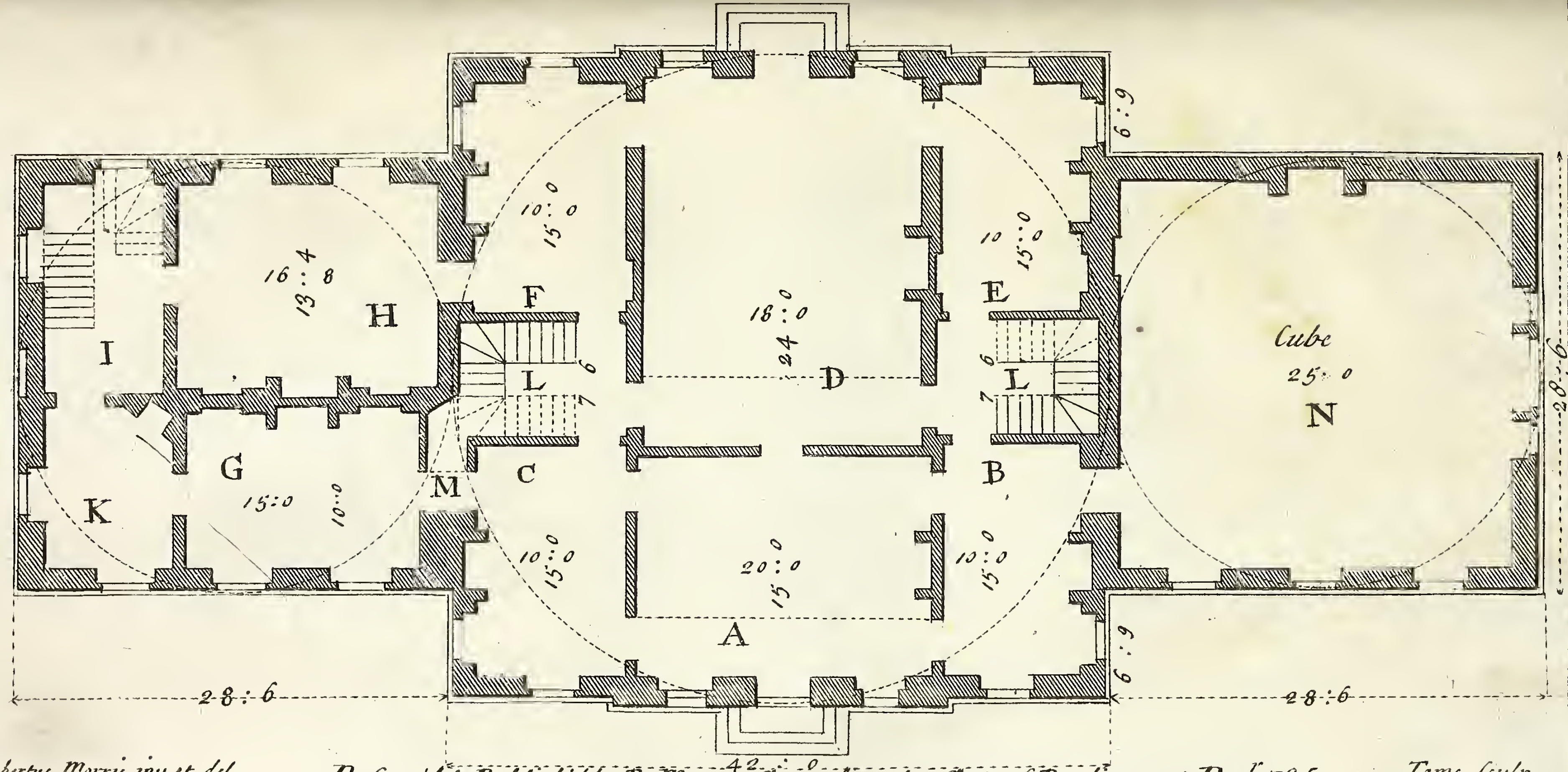
As in my 5th Lecture, Page the 68th and 69th, I have ſhewn what kind of Dreſs different Situations require, and how to appropriate the Decorations of the Deſign, that they may be analagous to the Spot: I propoſe in theſe enſuing Lectures to aſſign ſome certain Situations, and apply one of each of *my Proportions* to them, ſo changing them to anſwer the Purpoſes of Deſigning; uſing Ornament or Dreſs as a neceſſary Branch of the Art, not as if it was intended for Profuſion, but as a uſeful Embelliſhment; and in the ſame manner ſo to diſpoſe the internal Parts of Building, according to the Proportions I have already aſſign'd, Page the 75th, that no Part of the Structure may be ſaid to be undeſcribed, or unintelligible, as far as a Delineation or Draught is capable to expreſs. This is the Baſis upon which I propoſe to continue this Second Part of my Lectures, which will render this Undertaking, though a kind of abſtracted Syſtem of Building, uſeful to all who are immediately concerned in the Practice of Architecture.

The grand Branches of the Art are unlimited in Extent, they are not confin'd in Space, or circumſcribed by

Bounds; for by changing the Modus, or Style of Deſigning, the ſame Analogy may be preſerved through the moſt *magnificent Pile* that can be invented; and even thoſe Proportions may be differently modified, and differently embelliſh'd, without changing the General Proportions, thoſe being only the Ground-work for an *Architect* to entertain his Genius. The Cube may be divided into more or leſs Parts; it may be only 20 Feet, or extended to 50, *&c.* The ſame *Proportion* in both will have equal Graces; and even in a Room in Miniature, JUST PROPORTIONS will have their *Charms.*

IN delineating the Plan or Elevation of a Building, the Out-line is to be firſt form'd, as in the Plan and Profile before us, which are compoſed of 3 Cubes, as repreſented by the circumſcribing Circles. It is from thence the internal Parts, as well as the *ornamenting* and *diſpoſing* the proper Voids, and Decoration of the Front, are to be regulated; and thoſe internal Parts are proportion'd by firſt determining the Height of the principal Story, as may be ſeen at the End of the Profile; each Story being figur'd 10 Feet in the Clear, this, as a Standard to the whole, gives the Length and Breadth of each Room by ſome of thoſe Proportions:

page 138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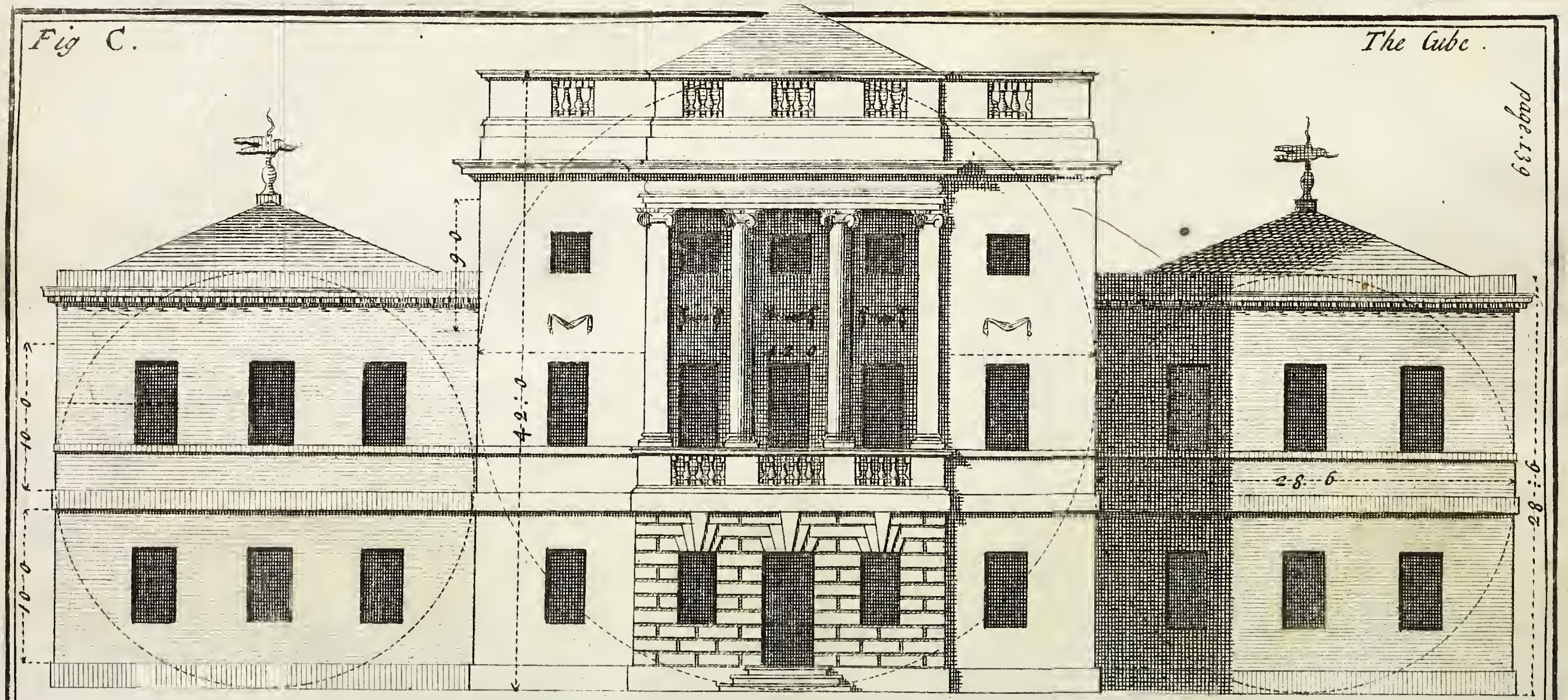
Robertus Morris inv. et del.  *Design'd & Publish'd by R: Morris according to Act of Parliament Decr. 1735.*  Toms sculp.

page.139

Fig C.

The Cube.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42:0
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28:6
28·6

Extends 99 Feet.

tions: So that by dividing the Height of the Room which you intend to allot by ſome of the *Proportions*, into a certain Number of equal Parts, the ſame Parts are the Standard by which you aſſign ſome allotted Parts for the Length and Breadth of the ſaid Room. To make my ſelf more clearly underſtood, I will call a Room the *Arithmetical Proportion* of 5, 4, and 3; that Room may be 12 Feet high, 15 Feet wide, and 20 Feet long: Or that Proportion may be extended to 18 Feet high, 24 Feet wide, and 30 Feet long, which are the ſame Diviſions, and in each of which Feet and Inches are not conſider'd as the Diviſions by which they are regulated; but I only uſe the Term *Feet* and *Inches* as they are more univerſally practiſed and known, and to ſhew *what* harmonick Numbers ſpring from ſuch *Arithmetical Proportions.*

IT may perhaps appear an Innovation, as well as Novelty, to introduce in Architecture a Method ſo different from the common Ideas People have conceiv'd of Building, and which has been an eſtabliſhed Rule ſo long practiſed; but if Men would impartially diveſt themſelves of ſuch miſtaken Principles, which may have miſled their Genius, I cannot ſee what Objection can be made to this Method, *that is*, to prevent its being practiſed. Suppoſe in the Plan before us, that the Room marked A is the Proportion 4, 3 and 2; the Height is divided into 2 equal Parts, each in YOUR Terms is called 5 feet; the Breadth is 3 of theſe Parts, call'd 15 feet, and the Length 4 of thoſe Parts equal to 20 feet, all which amounts only to Proportion 4, 3, 2.

SUPPOSE the Rooms which I have made in the ſame Plan, *&c.* are marked B, C, E, F, and G, to be the Cube and half; that is, the Height being 10 feet, the Breadth is 10, and the Length 15 feet; that is, the Cube and half expreſs'd by the Denomination of feet: the Height I divide into 2 equal Parts, the Breadth into 2, and the Length into 3, without Numbers. This Proportion I have in ſome Places called the Seſquialter.

THE Room marked H is the Proportion 5, 4, and 3, which is form'd by dividing the Height into 3 equal Parts; each is 3 feet 4; the Breadth containing 4 ſuch Parts, is equal to 13 feet 4 inches; and the Length being 5 of thoſe Parts, is 16 feet 8 inches.

THE Room marked D, is the ſame Proportion as that marked A; but it muſt be obſerved, that Room is 12 feet high, which makes it 2 feet higher than the lower Apartment; and in the Chamber Story, the Room over it becomes 2 feet lower than the other Rooms of that Floor. There may be a Paſſage and Communication to the Stair-caſes over the Place marked D, repreſented by the dotted Line. The Magnitude of this Room is form'd by dividing the Height (12 feet) into 2 equal Parts; each contains 6 feet; the Breadth (being 3 of thoſe Parts) is equal to 18 feet, and the Length (4 of thoſe Parts) is equal to 24 feet, or Proportion 4, 3, and 2.

THE Room N is continued through the Chamber-ſtory and forms the Cube 25 Feet.

THUS I have endeavour'd to demonſtrate the *Poſſibility* of Practiſing the harmonick Proportions by this Method; and I hope you will receive ſuch an Idea of the Neceſſity of *Proportions* to be uſed in *Building*, that their Uſefulneſs will become your Care to improve in and preſerve. The *Method* is ſo conciſe, and the *Proportions* are ſo eaſily retain'd in the *Memory*, that they will prove an important *Baſis* for a young Architect to build his Study on: Rules ſo eaſily digeſted, ſo extenſive, and fitted ſo exactly to tally with mechanick Numbers, muſt undoubtedly meet with a Reception equal to their Merit. I ſhall more particularly ſhew, in the Courſe of my Lectures, an Example of a Plan and Profile of each Proportion, whereby you may be convinc'd of the Veracity and Extent of thoſe Proportions, which I have laid down and eſtabliſh'd as an univerſal Rule to proceed by.

THE SITUATION of the Deſign before us, I propoſe on an Eminence about half a Mile diſtant from ſome publick Road, or ſmall Heath, to which I would have only a *Foſſee* to ſeparate an Avenue leading from thence to the Building; each ſide of that Avenue I would plant thick with Under-wood, and always kept ſo Low, that they might not prevent a Proſpect from the Houſe to remote Objects. About the middle I would propoſe a Canal, or large Fountain, to croſs the Avenue; and from thence to the Building, I would have it by a gradual, eaſy Aſcent,

cent, end in a ſemicircular, ampitheatrical Verdure of Ever-greens, in which ſhould be Openings to verdant Walks, terminated by ſome diſtant Landſcape, a beautiful Proſpect to a fruitful Vale, or ſome remarkable Object.

THE Avenue I would propoſe a Verdure, therefore the Approach to the Houſe ſhould be through the Wood on one ſide that Avenue; thoſe Woods to be cut through with Serpentine Walks, either regularly prun'd, or luxuriantly Shooting their Branches in a wild Diſorder; the Paths ſtrew'd with Sand, to render them more eaſy to walk on. From theſe agreable Retreats, ſome more open Walks ſhould invite the penſive Wanderer to roam, in which little Temples, or Seats for Eaſe, Repaſt, or Retirement ſhould be placed to terminate the View. The Offices ſhould be extended in a right Line from the Building Northwards (propoſing the Front a South Aſpect) join'd only by a Corridore, and ſo low built, that the Viſta's from the Chamber Windows might not be prevented being ſeen at the Ends of the Houſe.

THE Back or North Front ſhould have on opening to ſome Viſta, between which and the Houſe ſhould be an Ampitheater 160 Feet ſquare, and environ'd with lofty Groves on each ſide, to keep off the Keenneſs of the North Winds. I would have few Viſta's cut in them; for the Winds paſſing through, would render the Back Front leſs pleaſant to reſide in. I would in ſome Places, at certain Diſtances, erect ſome Statue, or little Building, to retire to in the Summer's Heat, or in the Coolneſs of an Evening's pleaſing Shade, when all Nature is calm, and undiſturb'd, and the Mind unbent from Cares or Fatigue. Such Retreats would give unſpeakable Raptures to a Soul capable to purſue a Tract of Thought in Infinity of Space, or contemplating upon the immenſe Wonders of the Univerſe.

THE Diſtance from any Town I would have at leaſt a Mile, and, if poſſible, one Viſta to it from the *Venetian* Window in the Room marked N, making that the chief Reception for Company; and by having your Windows to the *South* and *Eaſt* Fronts, you would render that Room leſs cold in the Winter. The Kitchen I would place at the *Eaſt* End of the Houſe, and to be built low in a Foſſee. The Acceſs to the Houſe, for common Uſes, ſhould be under the Level of the Ground, and by the Stair-caſes marked L; ſo the Ground-floor of the Houſe would be no way incommoded by Servants, but wholly appropriated to the Uſes of the Maſter, or Principal of the Family.

If the Situation would admit, I ſhould chooſe ſome Verdant Hill to the *North* Front, at about a Mile Diſtance, to ſhelter the Grove on that ſide the Houſe, lying as it were one third of a Circle round, that would render the Reſidence there in the Winter more tolerable; the *South* Front being all open, and the Proſpect no way interrupted, joyn'd with the little Walks and Avenues cut through the Woods, would be always agreeable.

Thus far with reſpect to the Situation it ſelf. The Building which I would erect on that *Spot*, is the Plan and Profile before us, compos'd of 3 Cubes; the middle one is forty-two feet, and the contiguous ones 28 feet 6 inches each. As the Offices are not join'd to the Houſe, but by a Corridore about 30 feet in length, to render the Building independant of them, I would propoſe Vaults under the Stables, which ſhould be Groyn'd, and placed to the *Weſt* Side the Houſe. On the *Eaſt* ſhould be the Kitchen, below the Surface of the Ground, and a Laundry over it, level with the Ground, the Uſe of the Corridore being only to make a Fence from the Garden on the *North* Front, and the common Approach to the Houſe. The applying *Rooms* to proper Uſes, is beſt done by thoſe who conſider the Wants for which Families require them, according to the Number or Quality of the Inhabitants; therefore I ſhall ſhew only the Form, and Magnitude, and Manner of compleating thoſe Rooms, leaving their Uſes to thoſe who beſt can apply them according to the Neceſſities which are moſt requiſite.

BEFORE I proceed to more particular Obſervations, it may not be improper to *explain* how the *Proportions* affect the Imagination. The EXTERNAL Parts of a Building, at a proper Diſtance, are circumſcribed by the *Retina* of the Eye; the INTERNAL Parts *terminate* the Rays of Sight, which ſtrike on the *Retina*, and circumſcribe them within the FOCUS or Point of Sight, by a *Reverberation* of Rays. So that all external Objects are more diſtinctly and more intelligibly view'd and conſider'd, by having a proper Diſtance aſſign'd for the Point of Sight. Whereas, the internal Parts being ſo near the Eye, it muſt roll or travel from Place to Place, and the IDEAS of the Objects *only* can affect the Senſes. This General Obſervation will be of *Uſe* to ſhew, that the IDEA of an *external* Cube, being ſtrongly ſeated in the *Imagination*, by only viewing two Sides of an *internal* one, the ſame IDEA will render ſuch Proportion equally agreeable. It is to be further underſtood, that all Cube Rooms, exceeding 28 or 30 Feet, requiring the Parts to be proportion'd to it ſelf, muſt render them difficult to be comprehended at one view; therefore an 18 Feet Cube for Rooms is preferable to one of 40 Feet. And all *internal* Parts do not ſo immediately ſtrike the Idea as an *external* one, where a proper Diſtance can be had to take in all its Parts at one View; but if a Cube be view'd in Profile, not having any Depth to be conceiv'd at the ſame Inſtant, an internal Cube may equally affect the Eye, ſince at the entrance into a Room, the one Side and Height may be comprehended the ſame as a Building thus view'd in *Profile*, which is only then conſider'd as a Square or Uniſon.

IT is in a great meaſure *Cuſtom* which familiarizes us to *Proportion.* A double Square for Doors or Windows, or any other Proportion with which we are more immediately acquainted, have ſo ſtrong a Propenſion in the Mind, that any *Parallellogram*, a little different from it more or leſs, may eaſily be diſcern'd. For the truth of this Aſſertion, I appeal to yourſelves, whether the Eye is not capable of ſo nice a Diſtinction. I mention this only to ſhew, that the *firſt Principles* of the Art being firmly ſeated in the Mind, it will be difficult to impoſe a Proportion on you, that is different from ſuch which have been familiar to you in the *Theory*, or *Practice* of the ART. I hope I need no Apology for this Digreſſion, becauſe it ſeems of ſome Importance to ſettle *Proportion*, which is the firſt Principle of ARCHITECTURE.

THE PLAN of the Ground-floor and *Profile* before us conſiſts of 3 connected Cubes, which extend 99 Feet. The Building I propoſe to be of Bricks, except the *Strings*, *Cornice*, and *Blocking-Courſe* round the Building, and the middle Part, which is *ruſticated*, the *Pedeſtal* of the *Order*, the *Pilaſters* and *Columns* of the *Portico*, the *Entablature*, and the

*Balluſtrades* round the Houſe, theſe, and the *Feſtoons* of Fruit, *&c.* I propoſe of Stone. The Feſtoons I introduc'd to keep an equal Margin round the Windows, which are ſo placed, that they are capable of receiving an elegant *Dreſs*: and by continuing the STRING round the *Building*, the breadth of the *Impoſt*, or *Cornice* of the PEDESTAL to the *Columns*, &c. of the *Portico*, it becomes a proper Bearing for the Architraves to ſtand on. The Dreſs I purpoſely omitted, that at your leiſure Hours you might ſee what Effect a proper *Decoration* of *Ornaments* to thoſe *Windows* would have, and what *Elegance* it would introduce by being regularly applied.

THE Internal part I would finiſh in the MODERN *Taſte*; the Entrance or Room A, and that marked D, to be done with *Stucco*, or finiſhing, on the Walls, as likewiſe thoſe Rooms marked E, and F; all the reſt of the Rooms of that Floor to be boarded; the *Cornice* of all the Rooms done in *Plaſter*, and *enrich'd.* The Room D, to have an *Entablature* of the *Ionick* Order, and the Cieling ornamented with Pannels, divided by a ſmall Moulding; and the Center ſome *trite Ornament* of *Moſaick* Work, *&c.* The Doors and Windows to have a proper Dreſs in Wood, and ſuch Rooms as are Wainſcotted, to have Marble Chimney-pieces, and Ornaments over them, and the other Portland or other Stone, intending a plain *Dado* or *Pedeſtal* Part to continue round each Room, the Height to the Bottom of the Window-Sills.

THE Room N, I propoſe to be Cov'd, and half thoſe upper Windows being ſtopt up, as is ſhewn by the dotted Line croſs the Window in the Profile, that Teer will become Attick or ſquare Windows under the Cornice, which continues round the Bottom of the Cove, which I would enrich with *Octogon Pannels*, and Flowers in them, and a Frame embelliſh'd with Ornaments at the top of the Cove next the Ceiling. This Room I would wainſcot to the Under-ſide of the Cornice. The *Venetian* Window, I propoſe to be of the *Ionick Order*, to be ſet on the *Pedeſtal*, which goeth round the Room; the Pillaſters of the Window to be 11 Inches Diameter, the middle Openings to be 5 Feet, the ſmall ones 2 Feet 6, each; ſo that the middle Window will be 2 Diameters high to the Cornice, and, with the Semi-circle above it, will be 2 Diameters and a half. The outſide PILASTERS to be of Stone, the inſide of Wood, The PIERS between the Windows, and thoſe between the Doors, and on each ſide the *Venetian* Window, I would elegantly decorate. The Chimney-piece of *Statuary Marble*; and over the Doors and lower Windows, Feſtoons of Fruit, &c. to preſerve a *Keeping* in the Deſign.

THE two Stair-caſes marked L, are deſigned to be of Stone, and to be continued from the lower Offices to the ATTICK Story. That marked I, to be of Wood, and to go no higher than the Chambers over the Rooms marked G, H, K. On the Ground-floor I would have a Communication to the Rooms marked C, and G, in the thickneſs of the Walls at the Paſſage M, which may be had under the Stairs adjoining to thoſe leading to the lower Offices.

THE Chamber-floor to be wainſcoted throughout to receive Hangings. The Floors laid with clean Deals; the Cornices of Plaiſter, and the Chimney-pieces of Marble, decorated with few Ornaments. The Cielings all plain, and only an *Ovolo*, or *Architrave*, with Cornice and Frieze, &c. over the Doors, and an Architrave round the Windows.

THE *Attick* Story of the middle Cube, I propoſe to be wainſcoted throughout in a plain manner; common boarded Flooring; and the Chimney-pieces to be of Stone, ſuitable to the Plainneſs of the Rooms. The reſt of the internal Finiſhing will naturally occur to the Memory of the ingenious *Theoriſt*, ſo to apply to make it analagous to the whole Deſign. I ſhould obſerve, that over the Hall at A, and over D, will be PARTITIONS, whereby that Room will become a Paſſage to the PORTICO, as may be better conceiv'd by the dotted Lines repreſenting thoſe Partitions on the Chamber-floor; the reſt may more intelligibly be explain'd by the *Plan* and *Profile*, thoſe requiring no other Deſcription than what a *Delineation* or *Draught* can expreſs.

AS Objections may ariſe to the Univerſality of the Proportion of the Cube, when it is extended beyond certain Limits, both to *external* and *internal* Parts of Building, and likewiſe to the Proportion 3, 2, and 1, when it is not circumſcrib'd within ſome allotted Extent; I intend, in my 12th *Lecture*, in deſcribing the *Analogy* of that *Proportion*, to explain their Limits and Uſes. There are many noble Deſigns which may be form'd from both, to reſcue thoſe from Cenſure, which I ſhall demonſtrate in ſome other Lecture.

THE Task I have undertaken, may have underwent ſevere Criticiſms from Men ſway'd by their own *Productions*; but if I can gain a *favourable Opinion* from the *few* whoſe *Taſte* and *Genius* diſtinguiſh Things without Partiality, I eſteem my ſelf *happy*. I have purpoſely ſtarted out of the *common Road*, not only as an *Amuſement* to my ſelf, but to exerciſe the Pens of abler Artiſts; or at leaſt to ſet them to the Practice of ſomething which may bear the Teſt of Examination. If all *Arts* and *Sciences* are confin'd by *ſtated Rules*, ARCHITECTURE is one of the Number; and if not the *nobleſt*, may be eſteem'd one of the moſt *extenſive* in Fancy and Deſign: It requires a nice Judgment, to compoſe the Parts of which it conſiſts into a regular Symetry. DESIGNING requires a *noble* and *fruitful* Imagination, a *true Taſte* of *Beauty*, a *Fertility* of *Invention*, a *Delicacy* of *Fancy*, to diverſify and preſerve the *Analogy* of the Deſign within that Mediocrity, that renders PROPORTION always the Delight and Pleaſure of the Eye, either in its plain, natural Simplicity, or when it is more elegantly deck'd with Ornaments.

IF I fall infinitely ſhort of that nice Taſte, I ſhall, however, *attempt* ſomething which RULES will produce, and where I have erred, ſhall eſteem it a Favour to be guided by ſome better *Genius.* I might perhaps *(with Aſſiſtance)* reſcue ARCHITECTURE from that Oblivion in which it has long continued ; and thoſe Impediments and Difficulties which are to be met with in Deſigning, may be compriz'd in a *few* plain and eaſy *Rules*, fitted to every Capacity. To attain the knowledge of ſo *noble* and *uſeful* an ART, are the ſincere Wiſhes of,

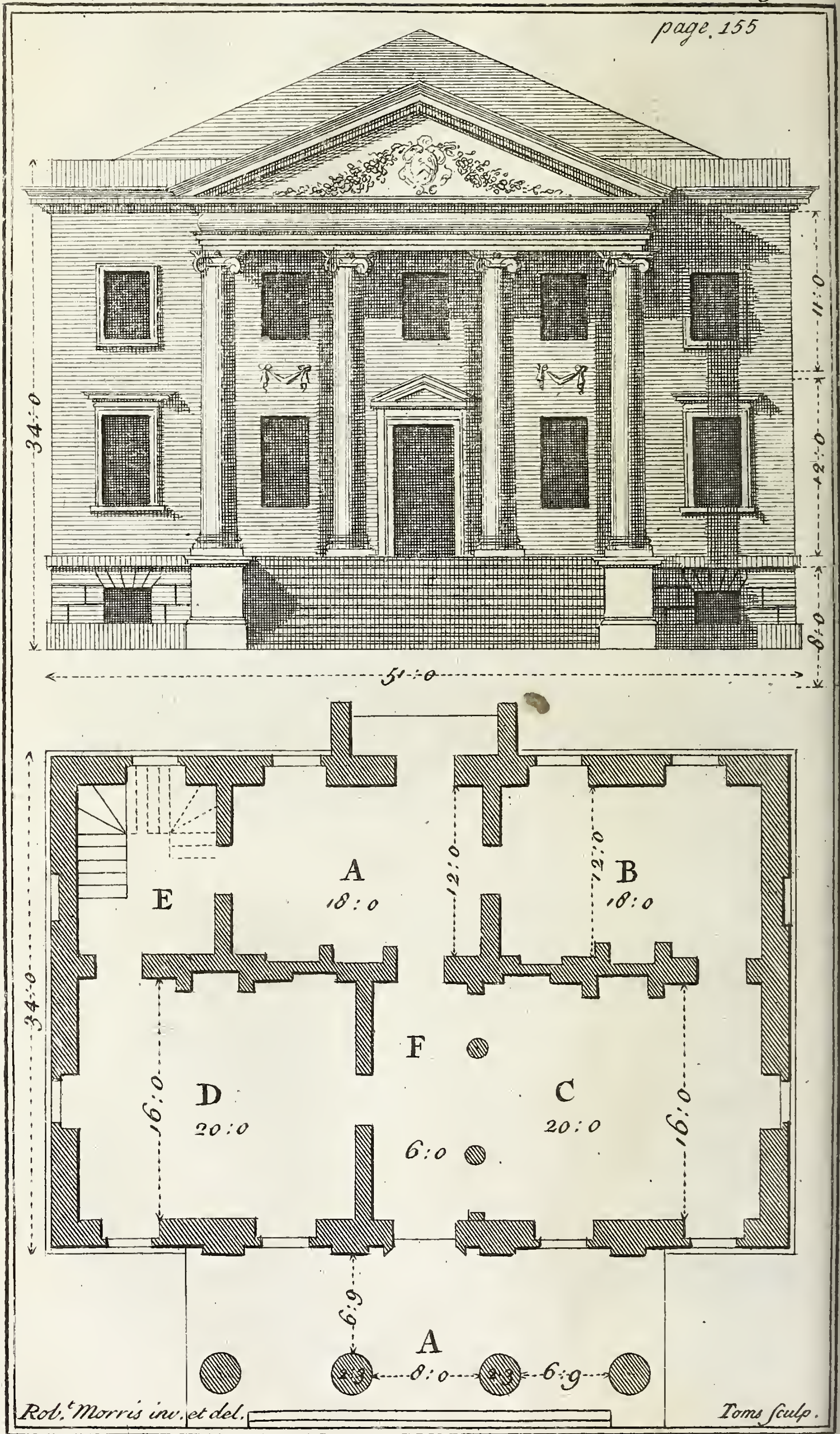
GENTLEMEN,

*Your humble Servant*, &c.

*Read to the Society*
Sept. 30. 1734.

*The Cube & $\frac{1}{2}$* **Fig. D.**

*page. 155*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B
18:0
E
F
D
20:0
16:0
C
20:0
16:0
6:0
6:9
A
2:3
8:0
2:3
6:9

*Robt. Morris inv. et del.*

*Toms sculp.*

# LECTURE

## The TENTH.

GENTLEMEN,

IN my *laſt Lecture*, it may be remembred, that I propos'd to divide the *external* and *internal* Parts of a Building by harmonick Proportions, not uſing Feet and Inches for the *Diviſions*, but by the analagous *Principles* contain'd in my firſt Part, for which I have compos'd different Deſigns of each Proportion. This before us being one appropriated to the *Cube and half*, its *Height* is 34 feet, *Breadth* or *Depth* 34 feet, and the *Length* or *Front* 51 feet.

I THINK it neceſſary, the better to explain the Uſes of ſuch *harmonick Diviſions*, to ſhew how the ſame Diviſions of the ſame Deſign may be *enlarg'd* or *contracted*, and ſtill preſerve all the Proportions in the *Plan*, as well as the *Profile* of the Deſign, ſo that each ſhall have all its Parts analogous to it ſelf. I ſhall therefore *ſuppoſe* a Building to be 60 feet Front, and to be the Proportion *Cube and half*, and the *Plan* and *Profile* the ſame as this Deſign before us. If the Front be 60 feet, and to be the *Cube and half*, the Depth will conſequently be 40 feet, and the Height 40. This is found harmonically, by dividing the Front into 3 equal Parts, and allow 2 of them to the Depth of the Building, and 2 to the Height. Or by Arithmetical Proportions, if 51 feet give 34, the Depth, &c. what will 60 feet give for a ſuppoſed Depth, &c. which Operation is ſtated by the common *Rule* of *Three*, thus:

ft. ft. ft.
If 51 : 34 : 60
34
——— f.
51)2040(40 the Depth requir'd.
204
———
0

If the ſame Deſign is required to be contracted, the Front to be 45 feet, the ſame Rules will produce 30 feet, the Depth and Height of the Building.

```
        ft.  ft.  ft.
For if  51 : 34 : 45
                  34
                 ----
                 180
                135
            --------- ft.
            51)1530(30 the Depth, &c.
                153              (requir'd.
                 ----
                   0
```

Thus far with relation to the increaſing and decreaſing the Proportions both *external* and *internal*, by *Harmonick* and *Arithmetical* Proportions. I ſhall now ſhew the *Analogy* of all the Parts to the Whole. And firſt for the Proportion of Rooms.——In the Profile before us, at the End mark'd 8 : 12 : 11, you find the principal Floor 12 ft. high. Therefore, if 51 ft. require 12 ft. for the Height of the Story, 60 ft. will require 14 ft. 1 Inch and a half, which is the Height of the ſuppoſed Story, found by the preceding Rules. The Height of the Story being thus augmented, the Length and Breadth of each Room will be proportionally enlarg'd. Therefore I ſhall ſuppoſe the ſame Deſign, both *enlarg'd* and *contracted*, and each Front and Rooms, *&c.* will appear thus explain'd.

| | ft. long. | ft. high. | f. deep |
|---|---|---|---|
| If the Standard Front be | 51 | and 34 | and 34 |
| The ſuppoſed Front | 60 | will be 40 | and 40 |
| And the ſuppoſed Front | 45 | will be 30 | and 30 |

So the internal Parts, to the 51 ft. Front, if the Height of the Story be 12 ft.

| | ft. | inch. |
|---|---|---|
| To the 60 ft. Front, the Height will be | 14 : | 1½ |
| To the 45 ft. Front, the Height will be | 10 : | 7 |

In the Rooms A and B in the Plan.

| ft. | ft long. | ft. broad. | ft. high. |
|---|---|---|---|
| If the 51 Front be | 18 : 0 | and 12 : 0 | and 12:0 |
| The 60 f. Front is | 21 : 2 | and 14 : 1½ | and 14:1½ |
| The 45 f. Front is | 15 : 10½ | and 10 : 7 | and 10:7 |

Again, in the Rooms D and C in the Front of the Plan.

| ft. | ft. long. | | ft. | ft high. |
|---|---|---|---|---|
| If the 51 Front be | 20 : 0 | & breadth | 16 : 0 | & 12 : 0 |
| The 60 ft. Front is | 23 : 6½ | & breadth | 18 : 10 | & 14 : 1½ |
| The 45 ft. Front is | 17 : 8 | & breadth | 14 : 1½ | & 10 : 7 |

THE *Harmonick* Terms for the Proportion of theſe Rooms, are A and B, the *Cube and half*; and thoſe marked C and D, are the Proportion 5, 4, and 3. The ſame Rules are univerſal for the *increaſing* or *diminiſhing* all the other Proportions.

THIS little VILLA is deſign'd for a ſmall Family, or one of moderate Fortune, where only Retirement it ſelf is wanted by the Inhabitant; therefore I would chooſe to have it ſituate on the Aſcent of a Hill, in a fruitful and open Country, with the Deſcent either to the Eaſt or South, the Back-part environ'd with Hills to the North. Some of the Lands below I would have cultivated, others *wild* and *woody*: nor ſhould it be far from ſome *River*, and the better if it were *navigable*. The *Champain* lying low to the Front, I would diſpoſe into Grounds for *Paſture* and *Tillage*. Some of the neighbouring Hills I would have *naked*, and *without* Trees, that they might ſerve for Corn only, which grows in a Soil moderately dry and rich, better than in ſteep or low Grounds. Some of the other Hills ſhould be planted with Timber Trees neceſſary for Buildings, or Utenſils for Agriculture. And if poſſible, to render the Situation ſtill more agreeable, I would wiſh for conſtant *Rivulets* of Water, to deſcend from thoſe Hills upon the Meadows; or to be convey'd by Aqueducts to the Service and beautifying the Garden, by Fountains or Caſcades, *&c.* Theſe ſhould be the *Decorations* and *Ornaments* of the *Villa*.

The Water would ſerve for the Uſe of *Cattle*, grazing in the *Fields* or *Thickets*, and a thouſand other Conveniences which Families require. As there are a multitude of Domeſtick Wants in a Country Seat, therefore as much Judgment, or more, is required in the Choice of a Situation for a *Villa*, than a Houſe for a City, and more Knowledge of Nature is neceſſary in the Application for the Services of a *Villa*.

BUILDINGS in Cities, erected for publick *Convenience*, *Religion*, or *Diverſions*, are more magnificent, and require the *knowledge* of ſome particular things not neceſſary to the Country Architect; yet the *latter*, in the Care he is obliged to take in providing for all things dependant upon Agriculture, for the Convenience and Uſes of ſuch little *Common-wealths*, whoſe Proviſions are to be ſupply'd within its own Territories, not furniſh'd perhaps by Markets, or Neighbours, as in Cities; I ſay, the Country ARCHITECT has as many different things to meet with, and ſurmount, that are not needful to be known by the *Architect* who is wholly employ'd in Buildings in the City; and few *Architects*, perhaps, have a nice and diſtinguiſhing Judgment for both.

As the Deſign before us is ſmall, the little Garden I would plant ſhould be proportion'd, and Care ſhould be taken ſo to lay out and diſpoſe of the ſeveral Parts, that the neighbouring Hills, the *Rivulets*, the *Woods* and little *Buildings* interſpers'd in various Avenues, &c. to give the more agreeable and entertaining Views, ſhould render the Spot a kind of *agreeable Diſorder*, or *artful Confuſion*; ſo that by ſhifting from Scene to Scene, and by ſerpentine or winding Paths, one ſhould, as it were, accidentally fall upon ſome remarkably beautiful Proſpect, or other pleaſing Object.

The Offices which I propoſe for *Stabling* and Agriculture, &c. ſhould be remote from the Houſe, which I would, as it were, ſurround with the Garden, except at one End; there I would propoſe the publick or common Acceſs under the Room mark'd D, which ſhould lead by a Paſſage to Stairs at the Weſt End of the Building. Theſe lower Offices I would propoſe for the Uſe of Servants; the Kitchen, and other Apartments for the Uſe of the Houſe, ſhould be placed between the Stables and Houſe at the Weſt End, not joining to either. The Offices under Ground ſhould be pav'd with Stone, and appropriated to ſuch Uſes which ſhould be thought moſt proper by the Inhabitant.

THE principal Floor being elevated about 6 Feet from the Surface of the Garden, will make the Apartment to the South and Eaſt Parts extreamly pleaſant; as it is on the Aſcent of a Hill; and the Garden diſpoſed in the manner I deſcribed, would render it a kind of little PARADISE. The Room marked C, I propoſe to be the Entrance of the South Front, divided by a Screen of Columns, at F. This Room I propoſe to be done with *Stucco*, the Cornice plaiſter'd, and Ceiling enrich'd with Ornaments; the Walls decorated with Feſtoons of Fruit and Flowers, and the Windows and Doors dreſſed with proper Ornaments, and all the Mouldings, where neceſſary, to be carved. The Rooms marked D, B, and A, to be finiſh'd with Wainſcot to the Walls, the Cornices enrich'd with Plaiſter, and ſuch neceſſary Ornaments introduc'd, as ſhall be appropriated to the Services to which thoſe Rooms ſhall be deſign'd. All the Floors to be of clean Deal; the Chimney-pieces to be ornamented in proportion to the manner of finiſhing the Rooms; and the Stair-caſe to be of Stone from the lower Offices to the *Attick* Story.

THE *Attick*, or Chamber Story, I propoſe to be wainſcoted throughout with plain Wainſcot, or prepar'd for Hangings; the Cornices of Wood, and the Cielings plain; the Floors to be of ſecond clean Deals, and the Chimney-pieces plain, or ornamented only with a few Enrichments. There will be a convenient Beauty in the diſpoſing the Room over C, either by placing an Alcove over the Screen of Columns, or by putting it at the other End of the Room, that that over B might become a Dreſſing Room to it. And if the Wants of the Family requir'd it, Lodging Rooms for Servants might be made in the Roof, and a proper *Illumination* might be had to them by little Sky-lights, or ſecondary Lights from the Stairs; obſerving only, that the Floors of theſe Garrets ſhould be laid with Plaiſter, for a Reaſon I have elſewhere aſſign'd.

THE *external* Part I propoſe all of Stone, if the Country near would produce it; or, as I propos'd it, near ſome navigable River, to render Land Carriage leſs expenſive, it might, perhaps, be eaſily attain'd. If ſo, I would propoſe the Baſement Story, in the *Dado* Part of the *Pedeſtal*, between the *Plinth* and *String*, to be *ruſticated* all round. This would give a Grandeur and Airineſs to the principal Front, and render the back Front likewiſe very agreeable, which being to the North, I would have it entirely plain, without Dreſs or Ornament to the Doors or Windows.

IF Stone could not be ſo conveniently had, I would have only the Columns, and the Steps and *external* Dreſs of it, and the other Parts of ſuch Bricks as were the Produce of the Country; if Red, the better, becauſe the blank Parts are ſmall, and few in number; and that would be the means of adding a particular Beauty to ſuch Parts as are Stone. The Reaſon which I aſſign, that I omit the Dreſs of the Windows in the Portico, is, that the Parts are leſs crowded, and it gives an Awfulneſs and Solemnity to the Spot or Situation. If you would give yourſelves the trouble to peruſe the 68th and 69th Pages of my firſt Part, yourſelves will diſcover how I have appropriated my Deſign to that Deſcription.

IT may be obſerv'd, that the ſame *analogous Proportions* are preſerv'd in the Margins, or Spaces round the Windows, and by adding thoſe Feſtoons, the ſame is preſerv'd through the whole Front, and the Windows of the back Front are ſo placed, that the ſame keeping of Deſign is continued through all the Parts of which it is compoſed. At the Ends I have added Windows for the ſake of the Proſpect; but in the Room over C, if your Alcove is placed there, a Blank muſt be made where the Vacuity now is, each Room having ſufficient Light without 'em.

THIS Plan, if required, might be alter'd on the principal Floor, by making at the Eaſt End only one Room, which ſhould be from the North to the South Front; and would be 30 feet long, and 20 feet wide, by making it range with the Screen of Columns, and placing a *Venetian* Window in the middle of the Eaſt End; but then that Room muſt be 15 ft. high, which Proportion would be 6, 4, and 3, and the Attick Story from being 11 ft. would be only 8 ft. high over that Room; but two Lodging Rooms the ſame Length and Breadth, as thoſe now are, might be had with this Alteration.

IF by thus altering the Plan, that Room might be had on the principal Floor, it might be objected, that ſuch a Room would be too large for the Magnitude of the Building; and if the Quality of the Inhabitant ſometimes required ſo ſpacious a Place for Entertainment, then conſequently Conveniency on that Floor would be wanted; and inſtead of ſupplying thoſe wants with more Rooms, one of thoſe which now are, would be omitted. It is certain, for a Family ſuch Alteration is not preferable to the Plan before us; but for a ſingle Perſon, not over-fond of Company, one ſtudious, and who prefer'd a contemplative, *rural Life*, with few Attendants, to one Generally eſteem'd *faſhionable* and gay, by converting that Room to a LIBRARY, in which, perhaps, might be his chief Reſidence; to ſuch a Perſon, that Alteration would be more uſeful, and the other 2 Rooms of this Floor might be ſufficient for his Uſe or Convenience. I would then propoſe to make the 2 *North* Windows of that Room *Blanks*, that in Winter it might be Warmer; the back Parlour, markt A, being proper for a Summer Eating-room, in which the VISTA would be continued the ſame as it now is.

THERE are doubtleſs many things may have eſcap'd my Notice, which had been more needful for me to *Explain*; but as things occur to my Memory, which I think of ſome Importance,

portance, you will, I hope, excuſe Prolixity; too much cannot be ſaid, if it tends only to render an Undertaking intelligible and univerſally uſeful; and there are ſome branches in many Arts that require extenſive Demonſtrations to be comprehended. However, if I have not wearied your Attention, I am careful of being too tedious: Therefore till another, or a more favourable Opportunity offers, I beg leave at preſent to eſteem my ſelf,

*Your humble Servant,* &c.

*Read to the Society*
Octob. 14. 1734.

# LECTURE

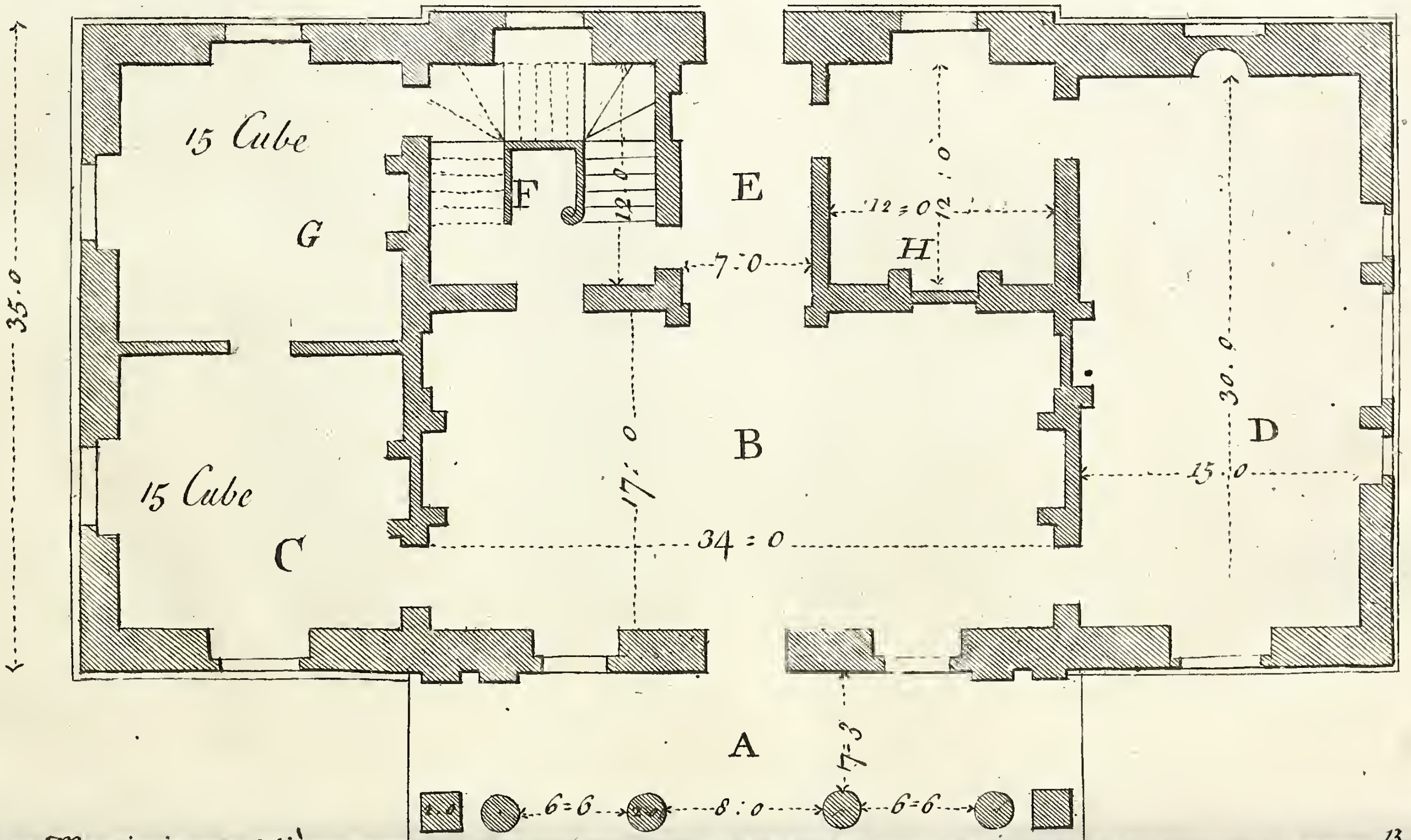
## The ELEVENTH.

IN Two preceding Lectures I have endeavour'd, in a particular manner, to deſcribe the Beauties of two different Situations. The Deſign before us affords a Delicacy of Taſte and Invention to appropriate a Spot analogous to its Decoration. It is of the *Corinthian Order*, dreſs'd with ſuch *Ornaments* and *Garniſhing* as are neceſſary to perfect the Compoſition. Here the ARCHITECT muſt be ſupply'd by an artificial Scene to entertain his Fancy: He muſt, by agreeable Images of rural Beauties, furniſh himſelf with what is *uſeful*, and adapted to the deſign, ſo joining ART and NATURE together to render the Scene the more delightful.

Fig. E

The double Cube

page 168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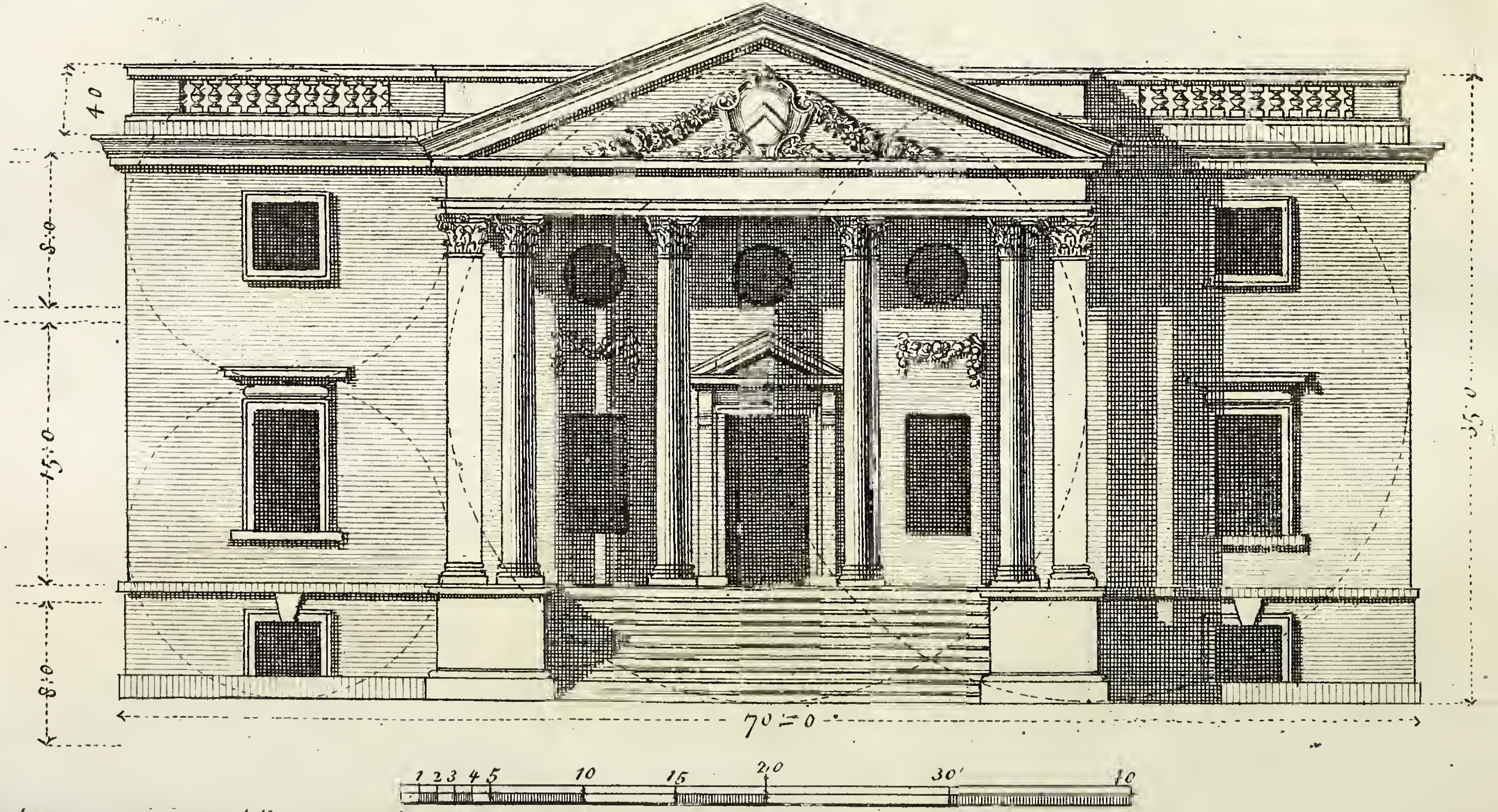
Robertus Morris inv. et delin.

B. Cole Sculp.

*The Double Cube* *Fig. E.*

*Page. 169.*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*Robertus Morris inv et delin - and publishd According to Act of parliament Dec^r 1735*

*B. Cole Sculp -*

THE firſt thing to be conſider'd, is the Uſe to which this Deſign is propoſ'd to be apply'd, it being intended for Pleaſure as well as a Retirement in ſome Garden, or agreeable decorated Spot. Few Conveniencies are wanting, therefore I ſuppoſe it only as a Summer-houſe a little remote from ſome noble *Villa*; and the Building I would place in ſome *Avenue* leading thereto. It is HERE in the *cooler Hours* of Reflection, a Man might retire, to contemplate the important *Themes* of *Human Life*; recluſe from gay Fancies, he might ſecrete himſelf, not envying the more External Grandeur of Power, or deſpiſing the humbler, or lower Claſs of Beings, to whom Providence or Fortune hath been leſs auſpicious. In the ſilent Receſſes of Life, are more *noble* and *felicitous* Ideas, and which more immediately concern our Attention.

A Man, whoſe *Genius* leads him to ſtudy ARCHITECTURE, may ſee in the Viciſſitudes and Changes it has undergone, what Revolutions of oppoſing Fates have been in the WORLD; how the *Materials*, which have been apply'd to Erect *noble* and *magnificent Buildings*, *Palaces*, &c. to immortalize the *Name* of the Founder, are now crumbling into Duſt, and perhaps a few Years more may totally annihilate them: How many populous Cities, which once were the Nurſery of *Learning*, and the Reſidence of ſucceeding Kings, are now no more, and even their Names ſcarce *tranſmitted* to us. By ſuch Reflections as theſe he may be led to conſider, that thoſe innumerable flouriſhing and populous Cities, NOW *celebrated* throughout the World, may undergo the ſame Change. He may alſo conſider himſelf as the Offspring of Parents which he can trace but a few *Generations* back; and in which no remarkable Tranſaction performed by them, worthy of notice, has been tranſmitted to him, to render their *Exiſtence* here of any particular Moment or Regard. He may contemplate the Numbers of ſucceeding Parents, between himſelf and the firſt Being of Human Species from whom he ſprung, and look forward, and conſider the infinite Numbers which may derive their Being from himſelf, and all to undergo the ſame Change. I ſay, ſuch Reflections as theſe, are always a noble and pleaſing *Theme* for a ſpeculative Mind.

IF from *Arts* and *Sciences*, ſuch entertaining Thoughts may ſpring, let the GEOGRAPHER trace the various Beauties of this *Terrene Sphere* ; let his Imagination roll from *Pole* to *Pole*, and view all the diverſifying Scenes of *Hills*, *Vallies*, *Rivers*, *Woods*, *Deſarts*, *Mountains*, and *Seas*, that he can meet with in Travelling from place to place; let him conſider the *Uſes*, *Beauty*, and *Deſign* of ſuch a Multiplicity of different *Scenes*, for *Warmth*, *Shade*, *Heat*, and *Cold*, in the ſeveral Climates; let him trace the *Veſtigies* of *once-venerable Cities*, the Foundations of *Troy* and *Carthage*, or the fam'd *Hellice* and *Burice*, memorable Cities on the *Helleſpont*, whoſe Foot-ſteps are no more, or no where to be found; let him ſearch for the Places of many *Iſlands*, once the Reſidence of *innumerable* Inhabitants, either long ſince ſunk in the *fathomleſs* Ocean, or chang'd their Stations; let him trace the pathleſs Face of the *Deep*, which hath tempted *Millions* to ſeek their *Fate* at the Bottom of the *Unmeaſurable Abyſs*. I ſay, let the GEOGRAPHER expand his *Ideas* from one *Chain* of Thought to another, and he will find what Pleaſures are attendant upon a *Calm* undiſturb'd Retirement;

what *Tranquillity* and *Sereneneſs* of Temper he may poſſeſs, thus ſecreted in theſe ſilent Retreats of Solitude.

IF the Earth with its *Beauties*, ſo familiar to us, are capable of ſuch *noble* and improving Thoughts, let the *Aſtronomer* expand his Ideas into the *endleſs* and unknown Tracks of *infinite Space*; what *Wiſdom* and *Harmony* appears in the Contrivance, and how wonderful ſuch Multitudes of *Planets* perform their Revolutions at their appointed *Periods* round their alloted *Orbs*; how the Earth's *Eliptick*-Motion ſurprizingly diverſifies the Seaſons of the Year, by its *Diurnal* and *Annual* Revolutions, and how each Part, in ſome meaſure, at certain Seaſons, from *Pole* to *Pole*, enjoys the Sun's *benevolent Beams* of Light and Warmth; how each Planet performs its alloted Courſe at *inſtantaneous* Periods, and to the ſeveral purpoſes for which *Providence* deſign'd them; and all ſubſervient to ſome noble Ends, of *Wiſdom*, and *Omnipotency*. When he purſues this Thought ſtill farther, and conceives Millions of unſeen Worlds, which may be diſperſed through this endleſs Scene of Space; when he can ſtill ruſh forward, and ſuppoſe each of thoſe Worlds capable of Inhabitants, and all ſerving for the ſame wiſe and *providential* Ends, with Amazement he can no longer purſue the tractleſs Thought, only have freſh *Reaſons* to adore that BEING who firſt form'd them, and is pleas'd to make our Exiſtence here of ſome Moment or Concern with the reſt of the *Creation*.

REFLECTIONS of this kind, are the Growth of Retirement to a contemplative *Genius*; and the *Deſign* before us, decorated with thoſe Embelliſhments, requires a Situation capable of raiſing ſuch elevated *Ideas*. I ſhall therefore ſuppoſe it erected in the *Center* of a *Wood*, and each Front to have an Opening or *Viſta* only the breadth of the Building. If it were on a little Aſcent it would be better, and more advantageous for Proſpect. Not far remote from the back Front I would chooſe a *Rivulet* or *Canal*. The Woods I would plant with low *Trees* or *Buſhes*, with little *Viſta's* and private Walks; and thoſe left wild and unprun'd, that at Noon-day they ſhould receive only Light enough to diſtinguiſh the *Blaze* of *Day* from *Evening Shade*, there the Chorus of the *Birds* would afford new Pleaſures, and by diſperſing Seats, *&c.* among the *Walks*, would greatly add to its Beauty.

WITHOUT the Woods I would have *Meadows* ſtrew'd with various Flowers, which being diſpers'd among thoſe of the *Earth*'s natural Produce, would render the Glebe more delightful to behold. If the *River* ran through it, and was diſpoſed into multitudes of little Streams, 'twould ſtill add to its Beauty, and make the Ground *more fertile*; 'twould diverſify the Scene, and by a Chain of riſing Hills beyond, to terminate the View, would make a beautiful Landſcape. In one part of the Wood I propoſe a *Grotto*, and in it a *Bath*. This ſhould be placed in the moſt unfrequented Part, ſurrounded with *Ever-greens*, and the Acceſs to it by a declining ſpiral Walk, to terminate in a circular *Theatre*, about 10 ft. below the Surface of the Garden. This, by *ſubterranean* Aqueducts, might be ſupply'd by the Rivulet, and *artificially* diſpers'd among *craggy, moſſy Rocks*, form'd by a skilful Hand, which would be a pleaſing Scene to gratify the curious Eye and Ear. The little murmuring Rills of Water, trickling down in diſorder'd Streams, would create a kind of *melancholly muſical Tone*, not altogether unpleaſant.

STILL to render the Retirement compleat, the Walks ſhould be a continued *Verdure*, and ſo planted, that ſome of them ſhould always afford perpetual Shade. The *timorous Hare* ſhould be protected from the Artifice of *enſnaring Men*; and the Birds poſſeſs perpetual *Freedom* without *Annoyance*. Here a *Mind* innocently employ'd by its *Starts* and *Sallies*, and its Excurſions into *philoſophic Depths*, by a Propenſity to Solitude, always meets with Entertainment. Every Sprig of *Graſs* may afford a multitude of fine Thoughts, to employ the Imagination; and by a Genius turn'd to *microſcopical* Speculations, a Way is open'd to entertain the Fancy with unbounded Reflections.

THE Proportion of the Deſign before us is the *Double Cube*; a Proportion whoſe Graces pleaſe in Profile, but when a Depth is ſuppoſed to it, is not always ſo agreeable. However, the Parts of which this is *compoſed*, diſcloſes to us a Neatneſs and Simplicity in its Decoration, and are diverſify'd in a certain Analogy peculiar to themſelves; and the Dreſs preſerves ſuch a Chain of Similitude, as renders it pleaſing and various.

THE Front is 70 ft. Length, and its Height as well as Depth is 35 ft. The Great Order extends in Breadth 35 ft. or one half of the Front, which is compoſed of 4 Columns, and 2 extream inſulate Pillaſters at the Angle of the *Portico*, 2 ft. Diameter, of the *Corinthian* Order. The remaining 35 ft. or half Front, is left to the 2 Sides next the *Portico.* So that the Height being 35 ft. each of the Sides are 17 ft. 6 Inches, or a double Square. The Parts being repreſented by dotted Circles, require no farther *Demonſtration.*

THE *Portico* I have placed on a Pedeſtal, whoſe Height is one fourth of the whole Order, placing at the End a double Pedeſtal for the *inſulate Pillaſter* and *Column.* This Pedeſtal is brought forward from the Range of Columns to the Range of the Steps, after the *Antique manner*; and, by placing a Statue on each, they would give a noble Contraſt to the Deſign. The Dreſs between the Columns I have been very ſparing in, not uſing any Ornament round the Windows, becauſe that will fill the intermediate Spaces between the Columns too much; and to preſerve the general Keeping, I have added a Feſtoon of Fruit, to keep the Margins or Spaces round the Windows, in the Intercolumniation, as equal as Conveniency would permit.

As ſome have raiſed the following Objections, I propoſe to anſwer them, to ſhew that thoſe little ſeeming *Errors* are diſcover'd by my ſelf, and thought no way material to amend.

OBJECTION the 1ſt. *In the Cornice of the 2 preceeding Deſigns, I have not drawn Modillions, nor in this Profile of the* Corinthian *Order.*

ANSWER'D. In ſuch *minute* Drawings, as the particular Form of the Members cannot be preſerv'd, ſo the introducing *Dentils*, or *Modillions*, would confuſe the Parts in which they are plac'd, and remain unintelligible. It is ſufficient that the General Proportions are juſt, and the minuter may be conceiv'd in the Mind. I am not about teaching a Knowledge of the five *Orders* of *Architecture*, ſuppoſing thoſe to be well underſtood by you; but it is the *Art* of Deſigning, which I am endeavouring to cultivate and improve. I am not curious whether a Cornice of the *Ionick* Order, or the *Corinthian*, be grac'd with *Dentils* or *Mo-*

*Modillions*, for external Uſes; thoſe things being not eſſentially neceſſary in the Art of Deſigning, the Harmony of the whole being the Care of the Architect to preſerve.

OBJECTION the 2d. *The Deſigns themſelves are ſmall, and internal Conveniencies have been my leaſt care to introduce.*

ANSWERED. As to the Magnitude of the Deſigns themſelves, I am to obſerve they may be extended to what Length your ſelves would propoſe, by changing the Proportion with Breaks, after the manner of my Deſign, *Lecture* the 13th; where you ſee the Proportion I have laid down cloſely follow'd, the Parts are analogous to its ſelf, and renders that Range truly HARMONICK, as may be obſerv'd in my Deſcription of it. And if a large extended Deſign was to be introduc'd, in ſo ſmall a Volume as this Work is compriz'd, the ſeveral Parts of a magnificent Building would remain unintelligible.

OBJECTION the 3d. *In the Proportions which I have laid down as abſolute, I have forgot the Conveniencies of Deſigning, and have ſacrific'd Uſe to Proportion,*

*portion, becauſe I would have all the internal parts, as well as external, tally with my Rules.*

ANSWER'D. The Uſes of a Building which is deſign'd only for an Amuſement, are uncertain, therefore cannot be properly appropriated to every Want, or hit every Taſte: It is ſufficient that they are commodious, and ſerve ſuch Purpoſes as I intend them. Thoſe who are pleaſed to give themſelves the trouble of examining, will find they may be converted to more Uſes than one, and ſerve many Purpoſes, which would be too tedious for me to deſcribe. As to what relates to the Proportions which I have limited, and ſince their Publication have been objected to, I here beg the favour of ſuch Objector to read ſeriouſly the 131ſt Page of the firſt Part of my Lectures, which I think a ſatisfactory Anſwer to all Objections of this kind, as well as thoſe I have now endeavour'd to clear, for the better removing ſuch Impediments which may prevent young Students in *Architecture* from having recourſe to *Rules* in the Performance of Deſigning. But to return.

THE other three Fronts I would only dreſs the Windows of with an *Architrave*, *Freeze* and *Cornice*; and in the *North* or back Front have Pediments over the Windows of the principal Floor, opening the Pedeſtal which is above the Cornice that goeth round the Building, for Balluſters over the Windows, as in the Front. The Materials I propoſe all of Stone; the Covering of the Roof, of *Lead*, intending it flat on the Top, and the Stairs to lead to the ſame for the advantage of a remote Proſpect.

THE Plan conſiſts of five Rooms on the principal Floor, the Entrance being through the Portico at A. The common Entrance to the lower Apartments being under the half Pace of the Portico. The Room markt B is a double Cube, being 34 ft. long, 17 ft. wide, 17 ft. high, the reſt of the Story being only 15 ft. the Floor of the Attick Story over this Room becomes two ft. higher, making thoſe Rooms only 6 ft. high, as a *Metzanino*, or half Story, the reſt of the Attick being 8 ft. in the Clear. The Rooms markt C and G, are Cubes of 15 ft. The Room D, a double Cube of 30 ft. long, 15 ft. wide, and 15 ft. high. The Room marked H, a Cube of 12 ft. to the top of the Cornice, above which I propoſe a Cove one fourth of that Height; which 3 ft. makes that Room the ſame height as the other. The Paſſage markt E, I propoſe 7 ft. wide, and to be Groyn'd. The Stair-caſe markt F, 12 ft. ſqr. of Stone or Marble, and to lead from the lower Offices to the Attick Story.

THE lower Offices have Light ſufficient for any Uſes; and lying but a ſmall part below the Surface of the Ground, the Floors may be boarded, and Walls wainſcoted in ſuch Rooms as may be thought neceſſary; and thoſe Rooms under B and D, may, if required, be each of them divided into two, and illuminated at the End and North Front, *&c.*

THE principal Floor to be embelliſh'd with Ornaments in the moſt beautiful manner; propoſing the Room B to have an Entablature of the *Corinthian* Order, fully enrich'd; the Opening to the Paſſage of the North Front to have a *Venetian* Arch, conſiſting of detach'd Columns and Pillaſters in Couplets, as in the Portico, 10 Inches Diameter, to ſupport an enrich'd Arch, the ſame Periphery as the Groyns; the other Doors dreſs'd with proper Ornaments; the Chimney-pieces appropriated to the ſame manner of Finiſhing; all the Mouldings, where neceſſary, to be carv'd; the Ceiling divided into Pannels, with Ornaments, *&c.* anſwerable to the reſt of the Room.

THE Room marked D, being at the Eaſt End, I propoſe to be a Library. The Cornice as the Room B, of the *Corinthian* Order. I propoſe the ſame Pedeſtals which ſupport the Pillaſters of the *Venetian* Window, to continue round the Room; the remaining Height to the Cornice to be filled up with Shelves for Books, ornamenting the Doors and Windows as in the Room B. The Ceiling deck'd with Ornaments of Fruit and Flowers, and the Chimney-piece ſuited to the manner of finiſhing a Room appropriated to that Uſe. The circular Part, or Head of the *Venetian* Window, to be a Blank, otherwiſe the Cornice of the Room would be broken or interrupted from continuing round.

THE Attick Story intended for Lodging Rooms, to what Purpoſes may be thought moſt uſeful, I would propoſe to finiſh in a plain manner throughout: The Chimney-pieces, and Ornaments to Doors and Windows, few, and appropriated more to *Uſe* than *Decoration:* Or ſuch Rooms which are moſt convenient, might be prepared for Hangings with Tapeſtry, or other Funiture. The Stairs leading to the Flat on the Houſe ſhould be over the Paſſage marked E.

FROM an Eminence thus ſituate many agreeable Views might be had to diſtant Objects, which would afford an amuſing Entertainment in the Sereneneſs of a declining Sun and calm Air, when Nature ſeems lull'd into a kind of pleaſing REVERIE. As this Profile before us is to terminate a Walk in a Garden, I propoſe, in the Courſe of theſe *Lectures*, to delineate ſome little Temple or Building, with its Plan, ſuited to this purpoſe. The ancient *Romans* planted their Plots in this *rural* manner; and their *Temples*, dedicated to their peculiar GODS, were diſperſed among the *Groves* and *Woods*, which Art or Nature had made, with *Viſtas* to them, or ſome more ſecret Approach, to which, for the moſt part, *Devotion* or *Luxury* led the Maſter of the *Villa* to retire to. In ſuch Retreats the *Roman* Senators were wont to taſte the Pleaſures of Retirement, to unbend their Minds from the more weighty Concerns of their Commonwealth; till, perhaps, ſatiated with too great an Exceſs of Indolence, and *ennervated* by Luxury, ſucceeding Tyrants claim'd a Superiority over them, and by degrees they loſt their LIBERTY.--- Then their noble *Palaces*, their magnificent and beautiful *Villa*'s, their delicious Situations were wreſted from them, and at length the whole Empire became a Seat of *wild Deſolation.*

YET ſtill their Arts ſurvive, and we may boaſt of many noble Genius's with ſuitable Fortunes, who are Copiers of thoſe fam'd *Romans*; *Cato* and *Pliny*, *Varro* and *Columella*, with their Villa's decorated in as *beautiful*, *rural*, or *magnificent* a manner as thoſe of the Ancients.——But choice of different Situations muſt much diverſify the intended Pile.

*—To ſome, perhaps, the pleaſing ſilent* VALE,
*Where* ſilver Streams *in* Eddies *glide along :*
*Or elſe the vernal Bloom, or rip'ning Glebe,*
*Or fertile Fields, with yellow Harveſts crown'd,*
*Seems moſt engaging to the wand'ring Eye.*

*—Others delight in long extended Views,*
*A noble Proſpect to ſome Champain Plain ;*

*A* riſing Summit, *or* declining Vale,
*Half ſcatter'd o'er with Flocks of fleecy* Sheep.
*Others, perhaps, a rude and barren Heath.*

*--The Gloom of Woods, and ſolemn lofty Groves,*
*The calm Receſſes of a penſive Mind,*
*May be the happy Choice of one whoſe Thoughts*
*No empty Glares of Pageantry poſſeſs*;
*Or falſe*, fugacious Vanities *allure.*

*Another's Eye the craggy Cliff may pleaſe,*
*The ſhocking* Precipice, *or uncouth* Wild;
*Where Nature no* prolific Seed *hath ſhed,*
*Beyond the Art of Man to cultivate,*
*A kind of* pleaſing, dreadful, rugged *Scene.*

*The* boiſt'rous Billows *of tempeſtuous Seas,*
*May more invite another's changing Mind,*
*To trace the* rolling Veſſel *in its Courſe,*
*Rais'd on the Summit of the* foaming Surge,
*Now mounting on a* Wave, *whoſe tow'ring Height*
*Another Wave ſucceeding, ſinks as low.*
*Alternate Scenes, like theſe, hath Nature made,*
*And diff'rent Sentiments do each poſſeſs*:
*What one* delights, *may be another's* Pain.

*All theſe the* Architect *muſt ſtudy well*;
*Be well inform'd, what Nature moſt requires*
*To fit and tally* Art *in all theſe Scenes*;
*To give a Greatneſs to the opening* Lawn,

*And pleaſing Softneſs to the rural* Glade.
*This is the* Art's Perfection *well to know* ;
*And he who traceth beſt the diff'rent Climes,*
*And moſt reſembles* Nature, *in his Choice*
*Of* Juſt Proportion, Garniſhing, *and* Dreſs,
*Appropriates* Art *moſt nobly to its Uſe.*

*A Genius born to penetrate ſo far,*
*To trace the* intricate *Labyrinths of Art,*
*And teach Mankind t'improve the* glorious *Thought,*
*Let ev'ry* Artiſt *celebrate his* Fame ;
*His Practice be Example to us* All,
*And* He *doth beſt, that beſt can* IMITATE.

GENTLEMEN, I hope you will excuſe this Digreſſion, when you conſider, that *Art* and *Science* in general is the End for which this Society was eſtabliſh'd to improve in. But particularly, as it is ARCHITECTURE, when I reflect on the *Beauty* of its *Rules*, I am led into a kind of poetick Rhapſody ; the continuance of which, as Time and Opportunity offers, will be a Pleaſure to me to communicate. Till then, I ſhall continue with due Reſpect,

*Your devoted Servant*, &c.

*Read to the Society*
Nov. 11. 1734.

# LECTURE

## The TWELFTH.

MY Three preceding Deſigns, of this ſecond part of my *Lectures*, have been diſpos'd chiefly to a *Rural* and *Pleaſant* Soil, I propoſe in this to change the Scene for one more *Robuſt* and Ruſtick, a Deſign capable of ſuſtaining the Storms and tempeſtuous Inclemency of the Elements; it being plain, and the *Plan* fitted by its Strength and Contrivance to withſtand the Injuries of Winds and Weather; and its Proportion apt to apply to ſuch durable Uſes, being the Proportion 3, 2, and 1; the Length is 90 feet, the Depth 60 feet, and Height 30 feet.

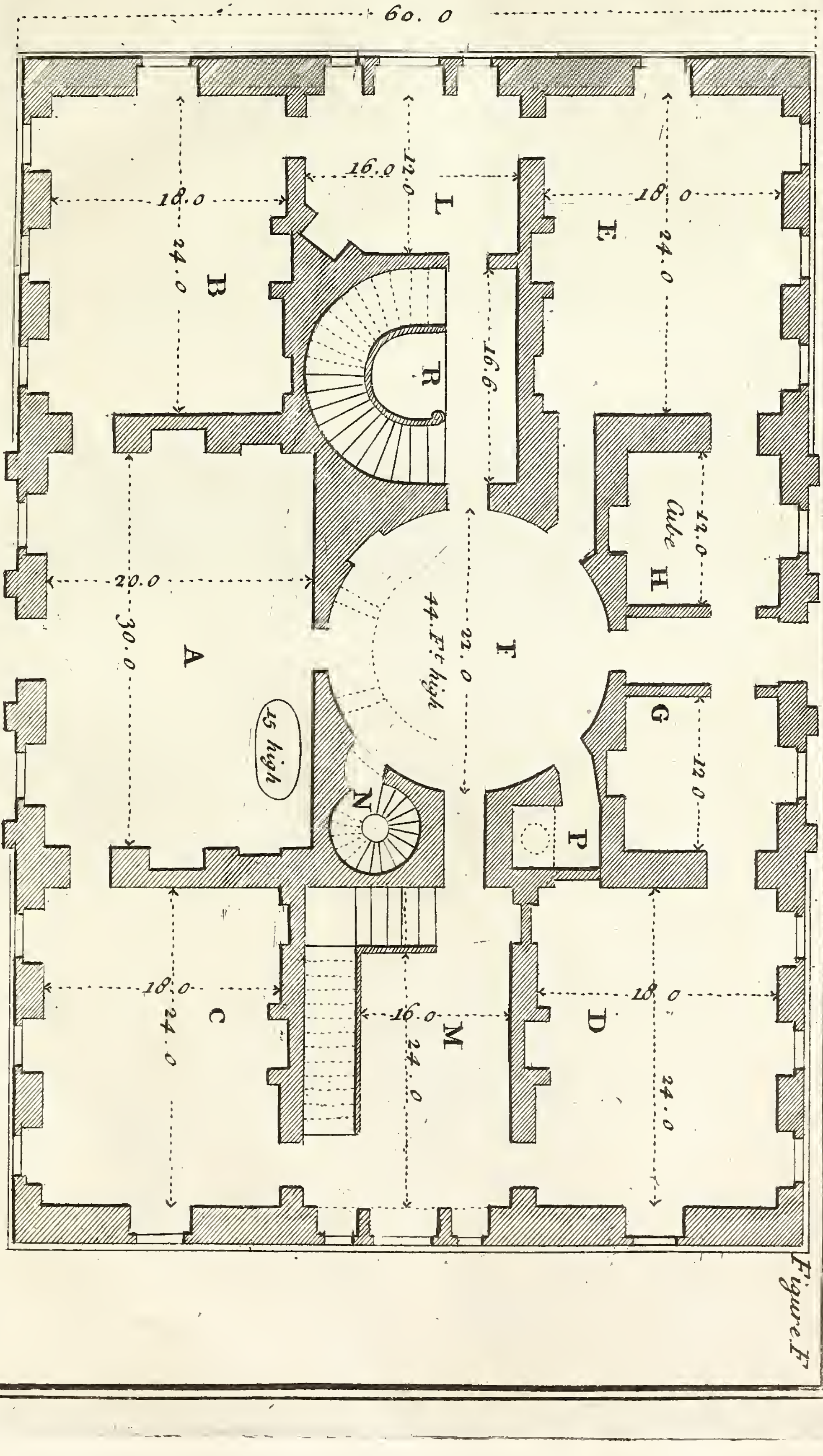
THIS Deſign I would propoſe to place on the Summit of a HILL, a long-extended Vale to the principal Front; and not far remote from the declining Verge of the HILL, I would have a navigable River: WINDSOR, or GREENWICH, or RICHMOND, or SHOOTER'S-HILL, afford a Scene ſomething like this; and the Profile before us being intended for the chief Front, I would propoſe it for a *South* Aſpect to the *Vale* below, bounded only by the declining *Horiſon.*

WITH the Variety of Woods and Meadows, and different Views of the River, I would wiſh to have ſome beautifully ſituated *Villa's*, interſperſed with little *Villages* and *Towns*; in the Scene ſome Views ſhould be to Paſtures cover'd with Flocks of Sheep, from thence to Fields of Corn, in which the ripening Harveſts would afford Delight to the Eye.

*Another Spot, a* verdant *gradual Riſe*
*To* Orchards *laden with delicious* Fruits,
*At once to gratify the Eye and Taſte.*—
*Another Scene, to* Groups *of lofty* Pines,
*The Entrance to ſome pleaſing*, ſolemn Grove,
*Where*

propor . 3.2 & 1 page 188

Rob. Morris inv. et delin.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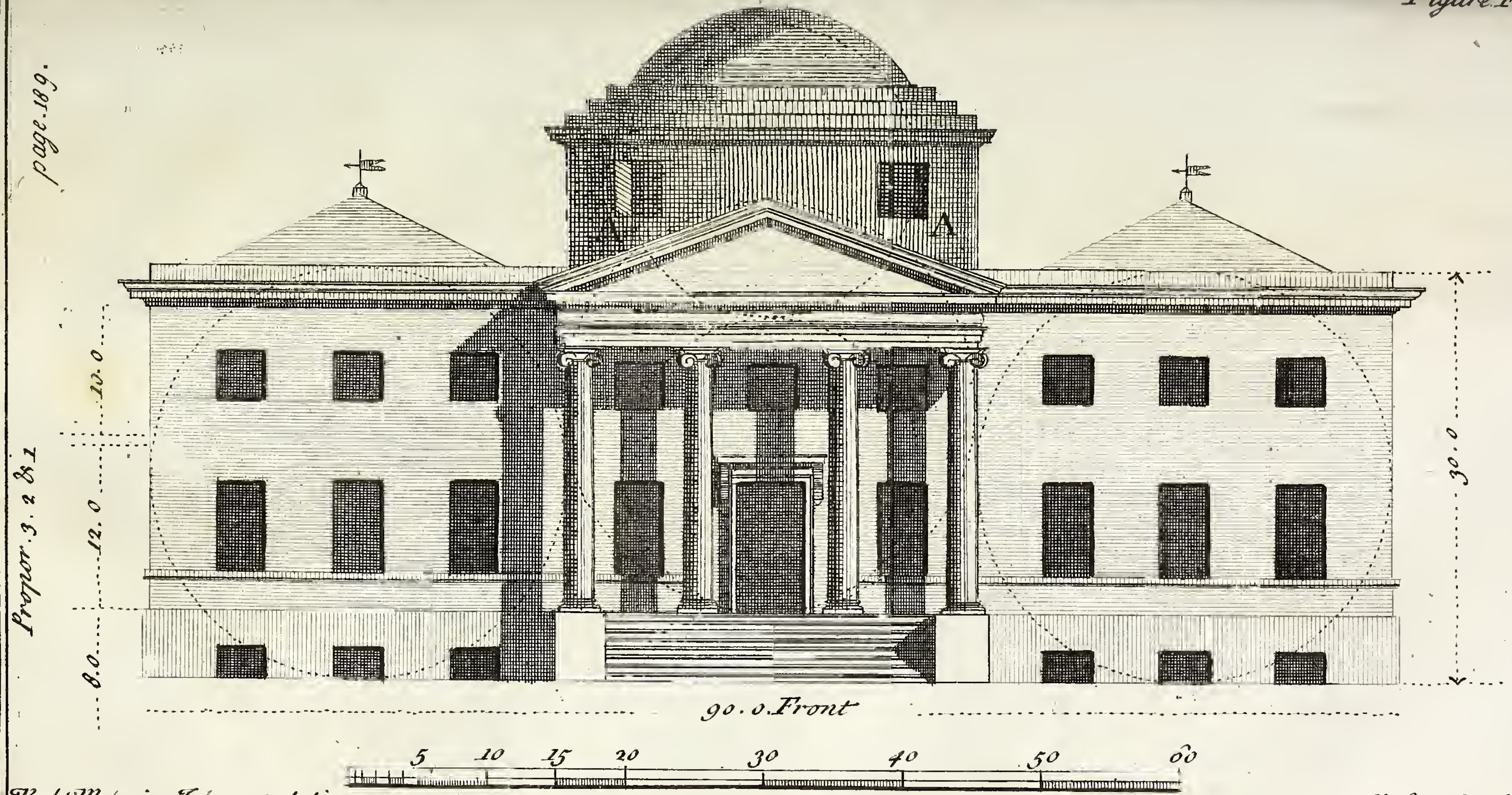
B. Cole Sculp.

Figure F

Figure F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Rob: Morris Inv. et delin.

B. Cole Sculp

*Where* Demi-Deities *are feign'd to dwell:*
*Such as the* BARD, *who ſung* Achilles' *Fame*,
*Deſcrib'd: Or* MARO, *of* Anchiſes' *Race*;
*Or ſweet-tongu'd* OVID, *in a ſofter Strain.*
*Such Groves, whoſe lofty Tops aſpiring riſe,*
*And ſhade in* ſolemn *Form the winding Paths*;
*Thoſe* ſtill Retreats, *that ſooth the penſive Mind,*
*Retir'd ſecretely in an Ev'ning Shade,*
*Or when the Rays of Light refreſh the Morn.*

*Another View the* circling River *ſhews,*
*On which the Veſſels, with their ſwelling Sails,*
*Among the* Woods *and* Gardens *ſeem to move,*
*Now in a* Line direct, obliquely *now,*
*Or* Line Eliptick, *as the Streams, or Wind,*
*Or rolling Tide directs 'em in their Courſe.*
*Such a Variety of rural Scenes,*
*Mingled with little* Villages *and* Towns,
*Would fill the Eye with Wonder and Delight.*

I WOULD have no Garden laid out by Art, but ſuch only as Nature it ſelf produc'd; the Vale below would afford all the Pleaſures of a diſtant View. I would have a little Spot ſufficient to ſerve the Houſe with Fruits and Herbage.

*Nature would there require no large Parterre,*
*No ſwelling Terrace, nor the Tulip Bed*;

*No* Grove *to ramble in, in Summer's Shade,*
*Nor* Spot luxuriant, *deck'd with laviſh Art.*
Northward *I'd chooſe a wild, or barren* Heath ;
*Or elſe a Proſpect to ſome diſtant* Sea ;
*Or elſe a Group of vaſt and* ſteepy Hills,
*Whoſe* craggy *Summits, with their diſtant Views,*
*Alternate Riſings, and their diff'rent Shades,*
*Shifting in various Forms from* Hill *to* Hill,
*A wild, romantick Proſpect would create.*

*When Summer's verdant Fields do grace the Plain*
*With wanton Flocks of Sheep, within the Meads,*
*In ſportive Motions,* kind of myſtic Dance,
*And other* rural Scenes *to fill the Eye,*
*There centers all the Pleaſures of the Vale.*
*Not ſo, when Winter's* Storms *the* North *invades,*
*When the* wild Waters *daſh reſiſting* Rocks,
*And bear the* tatter'd Veſſels *to the Shore :*
*Nor* Rigging, Tackle, Sails, *or* Maſt *you ſee* ;
*The Winds reſiſtleſs Force have torn away,*
*And drove the* ſhiver'd Wreck *upon the* Beach,
*Muſt be a moving, ſympathizing Scene.*

*If to the ſhocking* Precipice *you look,*
*And view the hideous* Landſcape, *or the* Cliffs
*Where barren Wildneſs reigns*—*No pleaſing Path*
*T'invite the wand'ring Traveller to attempt*
*A Place unknown, or an untrodden* Wild,

*No* Cultivation *to allure the Eye*,
*No* verdant *Spot, nor* azure *Violet Beds*,
*But* Wilds, *where* Birds *of* Prey *delight to dwell*,
*The* rav'nous Vulture, *or the* tow'ring Eagle:
*Or Reſidence, perhaps, of ſavage Beaſts,*
*Only to propagate and breed their Young*
*Within the* Caverns *of their* craggy Sides,
*Where the moſt Hardy would not be allur'd*
*By Profit, orby Nature's Choice to climb*;
*Such Scenes are* DERBY-PEAK, *or* DOVER'S-
CLIFF.

FROM one end of a *Building*, thus form'd in *Plan*, and a Situation, a View half rural, the other half a rocky *Wild*, or open to the Sea, would afford a delightful Variety, a pleaſant Landſcape. And from each Front, ſo many different Views might be had, in every Seaſon of the Year, as would render the Spot always agreeable; and if Buſineſs required a Reſidence in ſome populous *Town* or *City*, half that Pleaſure might be there enjoy'd, by having ſeveral Views of thoſe Landſcapes at different Seaſons, taken by a ſkilful Hand, at the *Villa* it ſelf. This would renew the Felicity, to ſee a beautiful Vale with all the fineneſs of a *rural Scene* from one Front, and a *Building* capable of being erected at ſuch a Point of Sight; and to the other, the well-deſigned Picture would diſcloſe to View, all the Horrors of *romantick Precipices*, or the Inclemency of the Elements in a *Tempeſt*.

THERE may be an Objection ſtarted to this Deſign, that is, *Making the Front of the* Ionick *Order, and a Portico to it, and placing it on an Eminence.* I anſwer, That the Front being to the *South*, or *South-Eaſt*, and to ſo agreeable a Vale below, I thought it more proper than the *Dorick* Order. And to the *Back-front* I propoſe no Portico; the whole Building likewiſe being as plain as it is poſſible to compoſe one of this Order, or even the *Dorick*. But then, to add to its Beauty in the Vale, the Portico will afford a majeſtick Appearance, and render the Building nobler in Aſpect, than if it was omitted.

AND as I have in the 69th Page of the firſt Part obſerv'd, that the *Ionick* Order is the moſt applicable to Situations of various Kinds, I hope I have not deviated from thoſe *Rules* which I have all along ſo ſtrenuouſly endeavour'd to propagate in the Application of *Proportions* as well as *Deſigns*, analagous to certain *Situations* for which a Fabrick is propos'd to be appropriated.

THIS Building is deſign'd to be erected with Stone, which it is not unlikely ſuch a Spot may produce; and if it was prepar'd from a *Quarry* ſome time before it be us'd, that it might harden in the Air, the Building would be leſs liable to Fractures, eſpecially at the Quoins or Angles in carrying up, than when Stone is uſed green, juſt raiſed from the Quarries. The *Venetian* Windows, at the Ends, I propoſe entirely plain; and each Front will preſerve a regular Affinity, and the internal Parts have thoſe *Proportions* which my preceding Rules have render'd practicable. The Uſes muſt be ſubmitted to ſuch whoſe Judgment, Wants, or Conveniencies more immediately require them, referring the internal Finiſhing to the Pleaſure of the more judicious Artiſt.

IT may be objected, *That the Dome had been better placed in the Center of the Building from* North *to* South. I anſwer, Its Situation does not require it, having no Approach to the Houſe at either End; and viewing it only in Profile from the two Fronts, cannot be diſcern'd how the Center of it is ſituate in

Depth: Beſides, one more prevalent Reaſon, which requires no Demonſtration.

THE Entrance at the South Front through the Portico leads to the Room A, whoſe Proportion is 6, 4, and 3, the Length being 30 ft. the Breadth 20 ft. and Height 15. The reſt of the Rooms of this Story being only 12 ft. high, I have made the Back-ſtairs mark'd N, the Way to the Room over it, which becomes a *Metzanino* of 7 ft. high, and the reſt of the Rooms of that Story 10 ft. high in the Clear. The Rooms of the Ground-floor mark'd B, C, D, E, are Proportion 4, 3, and 2; the Length 24 ft. Breadth 18 ft. and Height 12 ft. The Room mark'd F, is 22 ft. Diameter, and 44 ft. high; and the Rooms G and H Cubes of 12 ft. The two Stair-caſes marked R and M, propos'd to lead to the Attick Story; intending that marked R, to go to the lower Offices, and apply'd to the moſt common Uſes, and to be of *Stone*, the other of Wood.

THE Place marked P, is intended for a Stool-Room, in which excellent Proviſion may be made for Conveyance of the Effluvias of the Soil, to prevent Offence. At the circular dotted Line in the

Room F, on the Chamber-floor, I propoſe a Gallery ſupported by Brackets, as are repreſented there, to have a Communication from each Stair-caſe to all the Apartments of that Story, intending the Plan of that Floor the ſame as the Principal.

THE Front conſiſts of 3 Parts equally divided for the Length, and one of thoſe 3 Parts make the Height; they are repreſented by the dotted Circles in the Profile, in which it may be obſerv'd the Portico is circumſcribed by one of them; and the 2 ſides being equal to the Portico, makes the whole three equal Squares. The Roof is intended to be fram'd with a Vally round the Dome, in order to give Light to the Room markt F in the Plan, the Windows being plac'd at A A in the Profile, and to have 4 of them in Number, this Room having no other Vacuity whereby it may be Illuminated. The 2 ſmall dotted *Circles* which meet in the Freeze of the Entablature of the Portico, circumſcrib'd within the internal Height of the Dome, are only to repreſent the Height of that Room of two Diameters. The reſt of the Profile explains it ſelf, or may be better comprehended by examining the Plan.

IT may be remembred, that in my Ninth Lecture I propos'd to aſſign ſome allotted *Proportion*, not to be exceeded in the Application, to uſe either *external* or *internal*, and this Proportion 3, 2, and 1, as far as they relate to Building. The Reaſons which induce me to adhere to ſuch reſtricted Proportions, are founded on the following Obſervations. An Object whoſe *Proportion*, *Bulk*, or *Magnitude* cannot be ſtrictly circumſcrib'd by the Eye at one View, the whole of that Object cannot be comprehended in the Idea; nor are the Parts ſo eaſily retain'd in the Memory, when the Chain of Proportion is broke by introducing a new Idea, which it muſt receive when the Eye is forced to travel from Object to Object, to circumſcribe all its Parts. Therefore the Point of Sight, or proper Center to view all Buildings in GENERAL, is, where the Eye can at one View ſee the Extent of Length and Height, which is to be circumſcrib'd by the Eye in the *Focus*, or *Point* of *Convergence*; then the ſeparate Parts. As, ſuppoſe a *Portico*, or other *diſtinct Breaking*, which compoſeth the general Keeping of the Deſign, theſe are to be view'd at a nearer Approach, and at ſuch a Point only where the Eye can take in ſuch Parts as are to be view'd, according to the General Building, in proportion to the *Altitude* or Extent of the Object. But, to examine the *Correctneſs* of the Particular Members, the *Neatneſs*, *Beauty*, and *Spirit* of its Ornaments, the Eye muſt ſtill advance nearer to ſuch a Point where the Rays are not reverberated on the *Retina* of the Eye, but unite in one Point of Convergence, like the Rays of Light in the *Focus* of a Burning-Glaſs, which unite at a Point determinable by its *Radius*.

IT will not be improper to obſerve here, that the ſame Diſtance required to view the Profile of a Cube, or any other Proportion aſſign'd, will be the Point of View to a Square in a compound Profile. *Here Note*, That a *Building* by it ſelf, independent of other Proportions, ſuch as the Cube, the Cube and half, the Double Cube, *&c.* has alſo the Depth to be conſider'd in its Compoſition; and that is dependent on the Proportion of its Length. But in a compound Profile, where the Face of the Building is extended to 5 or 600 ft. the DEPTH is not to be ſuppoſed as a neceſſary Proportion to that General Deſign;

ſign; therefore the Cube is then call'd a *Square*, the Cube and half is call'd the *Square* and half, and the Double Cube is only ſuppoſ'd a Double *Square* independent of Depth.

SUPPOSE, *for Example*, that a Building is 700 ft. Length, its Proportions are then to be compounded of ſuch Parts as will introduce a *Nobleneſs* and *Variety* in its Compoſition; which, by Breakings into the *Square*, the *Square and half*, *Double Square*, &c. to preſerve ſuch General Proportions, and by changing the *Dreſs*, or *Modus* of the Deſign, renders that Gracefulneſs requir'd to form a Deſign of ſuch Extent. And no Building, exceeding 140 ft. in Length, without Breaking for the preſerving ſuch Proportion, can ever appear *beautiful*; and each Part muſt have an Affinity to the whole, and yet be independently agreeable.——*And note*, all ſuch Proportions are to be view'd for their own particular Graces at a proper Point of Sight, determinable by its own Rules, which you may ſee by the Deſign in my next Lecture. But when they are conſider'd as a Part of the whole Compoſition, they are then ſuppos'd only proper Parts of the whole Range, in which *each* is to be ſuppos'd dependent upon the Point of *View*, where the *Focus*, or *Retina* of the Eye can circumſcribe an Object 700 ft. Length, which is ſometimes ſuppos'd at a Point where the Length makes the Extream Rays to the Eye an equilateral Triangle, each Angle then becoming Acute, and of 60 Degrees.

GENTLEMEN, I have extended this Diſcourſe farther than at firſt I propoſed, that I might better inculcate the Idea of PROPORTION, a THING ſo eſſentially neceſſary in the Art of Deſigning, as well as the Baſis of *Arts* and *Sciences*, that without it nothing can be perform'd to give Pleaſure to the EYE. And I muſt at the ſame time obſerve, that all Proportions are founded upon *Rules*, and all *Rules* are dependent on *Nature*; and if in Nature there happen ſome Deviation, ſome *Luxuriancy* or *Want*, even thoſe PHÆNOMENA may be moſtly accounted for. The wanton *Vine* may be directed by Art not to ſhoot into ſuperfluous Branches, and the more ſturdy *Oak* may, by RULES, be *directed* in its Growth: Both flow from Cauſes in Nature, and both are to be guided by the ſkilful Hand of the Artiſt.

THIS Chain of Thought opens to the Mind a vaſt Field to entertain the Tongue or Pen of a Philoſopher, to plunge into the deep Receſſes of Nature.

*To trace the Mazes of this myſtick World,*
*The Form, the Motion of this* terrene Sphere ;
*The ſecret* Springs *which guide it in its Courſe,*
*And all the* vegetative *Tribes preſerve* ;
*The more amazing Structure of ourſelves* ;
*Or the celeſtial Orbs which move above :*
*There let the great* Imagination *dwell,*
*And, with the* Planets, *roll through endleſs Space.*

PARDON this Deviation from my Subject, I muſt defer THAT till another Opportunity. I am, during the Interval,

GENTLEMEN,

*Your moſt humble Servant.*

Read to the Society
Nov. 25. 1734.

# LECTURE

## The THIRTEENTH.

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GENTLEMEN,

THAT I might better illuſtrate by Example the Subject of my laſt Lecture, I have here connected together the Profile of a Building compos'd of different Proportions, which might be extended to a far greater length by continuing the Range in Breaks after the ſame manner, this being only 540 ft.

THE Center is compos'd of a double Square, extending 120 ft. breaking forward 7 feet, and is mark'd under the Profile with a B; the Height is 60 ft. the Break mark'd A, is half the Length B, that is, 60 ft. and being equal in Height, is compos'd of a Square; the dotted Circles in the Profile are a ſufficient Explanation: The Break mark'd C,

falling

falling back from the Break B, becomes a new Proportion independent of the other two, and is the Square and half, being 78 ft. long and 52 ft. high, and like the middle Part is farther deſcrib'd by the *dotted Circles.* The next Part mark'd D, is the Square of 60 ft. and a Proportion not attach'd to the Part mark'd C, but breaks forward five feet; its Decorations are analagous to the Center. The remaining part of the Range mark'd E, is a double Square, its Length 72 ft. and Height 36, and falls back from D nine feet; the Circles explain its *Analogy*, and its *Decorations* have an Affinity to the whole.

THIS Range might be ſtill continued, by joining the Proportion F, or *three* and *one*, conſiſting of three Squares, the Length 120 ft. and the Height 40 ft. and, to terminate the whole Range at each End, I would place a Square of 36 ft. with a ſmall Tower, ſupported by Columns of the *Corinthian* Order, with a Dome on the Top; the whole would then make an *elegant* and *magnificent* Deſign, its Length would then be 852 ft. I at firſt propos'd to delineate the whole Range, and to have added a *General Plan* of the principal Floor; but the minuteneſs of this Volume, the Trouble and Inconvenience of folding Plates, prevented that taking Place; *beſides*, the omitting this Part, will doubtleſs engage ſome of *you* to try what Effect that Addition will have to the whole Range, and what *Beauty* ſuch Proportions connected together will produce. To analogize and terminate the Range, the *Cupola* on the Center mark'd F, is 22 ft. Diameter, circumſcrib'd by a Circle, and is the Proportion *Uniſon*, or a Square.

THE Dreſs and *Decoration* of this Profile have been ſparingly applied, and have been my leaſt Care to preſerve, becauſe the Parts being ſo minute, cannot repreſent the Form of the Members; therefore I would have the *Ingenious Theoriſt* take any of theſe Proportions alone, and draw 'em to a *large Scale*, preſerve the ſame general *Magnitudes*, then decorate the Parts in the moſt profuſe and luxuriant manner, and ſee what Effect Ornament has upon an elegant well-proportioned Deſign. To carry this ſtill further, let him take each Part drawn to *one Scale*, embelliſh them with Ornaments even to *Laviſhneſs*, and differently, then place them together in the ſame Order as they are here done, view them join'd in one Range, examine them ſeparate, tranſpoſe them to different Places, and in whatever View you place them join'd or ſeparate, I believe every Part will be found to have their peculiar *Graces:* Nay, even void of Decoration or Dreſs, PROPORTION muſt infallibly give Pleaſure to the Eye.

IF you turn back to the 75th Page of my firſt Part, Lecture the Fifth, you will find the *Cube,* the *Cube* and *half,* and the *double Cube, &c.* confin'd within certain Limits. I am here to *obſerve,* as they are not conſidered as Cubes when *join'd* with other Proportions to conſtitute a Range, therefore *thoſe* Proportions are not under ſuch Reſtrictions as they are when only conſidered as the *Square,* the *Square* and *half,* and the *double Square, &c.* but each of *theſe* are under limited Magnitudes: The *Square* in Profile ſhould never exceed 70 ft. the *Square* and *half* 100 ft. Length, nor the *double Square* 140; the Proportion *three* and *one* ſhould not exceed 180 ft. Length, *&c.* Theſe are to be obſerved when any of them are uſed as Squares, *&c.* in a Range to form a long Extent of Deſign.

THUS I have endeavoured to explain what I intended in my laſt *Lecture*; and by thus joining the Proportions, and comparing the ſame ſingle, you may eaſily diſcern the neceſſity of uſing them in the Compoſition of any Deſign.

THE whole Building I would propoſe to be of *Stone*, if the Spot I intend it to be erected on would with Convenience permit; to the *Front* ſhould be a large *Canal* or River, about half a Mile diſtant; and on the eaſy Aſcent of a little riſing Ground ſhould be placed the *Profile* before us; a *Terrace* or large *Parterre* to be the opening of the whole Front, and with a Declivity to the Verge of the Water.

—— *From a Building thus ſituate,*
*Noble* Caſcades *and* Fountains *might be form'd,*
*Rais'd from the* Silver *Surface of the Stream,*
*In wanton* Eddies *flowing*, circling *round*
*The verdant Softneſs of its riſing Side*——

—— *Mark, in the Stream, the harmleſs finny Prey,*
*Sportive, and fearleſs of th' alluring Bait,*
*With ſilent Motion cut the yeilding Flood,*

*And*

*And heedleſs glide along the ſhallow Shore,*
*Untaught by Guile to fear the barbed Hook,*
*Securely happy in their Element——*

*This Front, thus open to the fruitful Vale,*
*The Ends by* Woods *and* Gardens *circumſcrib'd,*
*Thro' which the Viſta's, or more private Walks,*
*Form'd by the skillful Artiſt in Deſign,*
*And well diſpos'd more diſtant Views to take;*
*Or winding* Labyrinths, *or ſecret Paths,*
*Where ſcatter'd* Temples *ſtand obſcurely plac'd*
*Within the Limits of ſome* ſolemn *Grove,*
*Or* Seats *to terminate a ſhady Walk.*

*——Here the ſoft Muſick of the feather'd Brood,*
*Whoſe* warbling *Sonnets* echo *thro' the Woods,*
*In Strains melodious chant from* Spray *to* Spray;
*Some* nicely *binding up the tender Roots*
*In circling Forms, to hold their feeble Young;*
*Others ſit ſilent, with uncommon Care,*
*To hatch the* ſhapeleſs Embryo *in the Shell;*
*Another's Care the callow Young to feed,*
*Or by Example lead them on the Wing,*
*Teach them thro'* tractleſs Air *to ſhape the Way,*
*And ſhun the Dangers common to them all.*

*——Here Nature likewiſe laviſhly ſhould reign,*
*Sport in the* Azure, *or the* verdant *Bloom*;
*Or blended with the* Roſe, *or* Tulip *gay*,
*Or more obſcure, within the Violet Bed*,
*Woſe Borders* Nature *variouſly adorns:*
*Or mark the* yellow Glebe, *or rip'ning Fruit*,
*The bluſhing* Peach, *or* Nectral *deeper dy'd.*

*——All theſe has Nature made for Uſe of Man*,
*His* Eye *to pleaſe, or nicely hit his Taſte*;
*To mingle Pleaſure with his common Cares*,
*And make the* Toil *of* Life *glide ſmoother on.*
*If* Providence *ſo* wiſely *has ordain'd*
*The humbler* Claſs *of Beings to preſerve*,
*To cheriſh all the* VEGETATIVE *Tribe*,
*And lead the* ANIMAL *by* Inſtinct *on*,
*And all to ſerve that* nobler *Being* MAN;
*What Pleaſures may from ſuch Retirement flow*,
*Where mingled Charms and Contemplation dwell?*

*Ev'n thoſe who're born to* GOVERN *Human kind*,
*Might here feel* Bliſs *to* captivate *the Mind.*

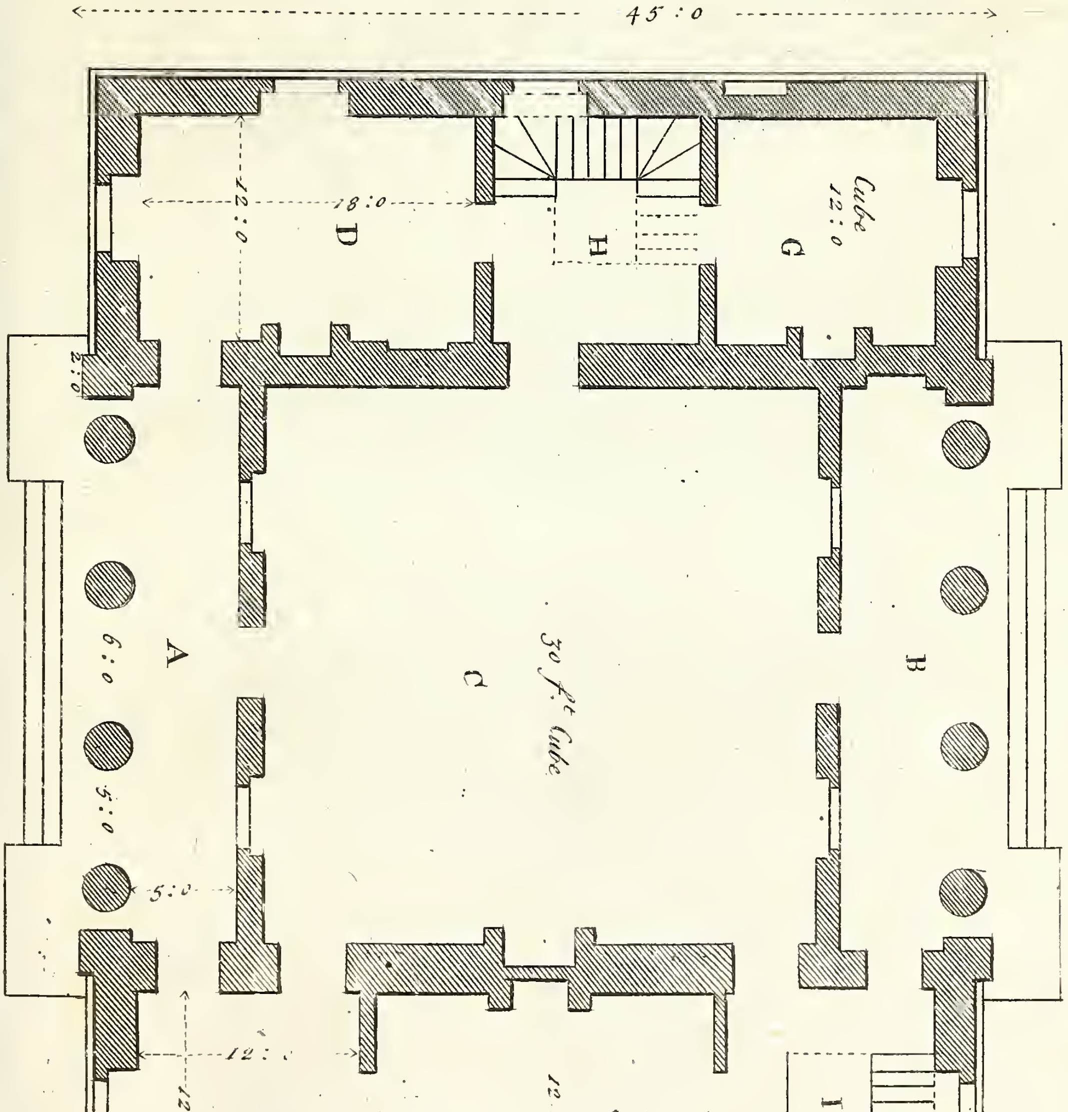
As ſome Walks would be more ſpacious, and *Viſta's* of large Extent, I would propoſe in ſome *Avenue* to place the other Deſign before us, as a little Retirement for Repaſt or Eaſe, ſo that from each Front in the *Portico's* mark'd A or B, a Shelter might be had, and the Proſpect not interrupted. The Deſign is the Proportion 4, 3, and 2; the Front 60 ft. the Depth 45 ft. and Height 30 ft. The *Portico* is circumſcrib'd by a *Circle* of 30 ft. Diameter; the remaining Parts on each ſide the Portico conſiſt of 15 ft. each, and are 30 ft. high, ſo that each of theſe becomes a double Square; the *Columns* and *Pillaſters* are two ft. Diameter, the Sub-plinth is one ft. Diameter, which continues round the Building; the Columns with their Baſe and Capitals are 10 Diameters high, the Entablature two Diameters, and the Balluſtrade one fifth of the height of the Column. The Fronts A and B are alike; the Height of the firſt Story is 12 ft. and the upper Rooms 10 ft; the Entrance is through the Portico to the Room mark'd C, which is a Cube of 30 ft. and to the Room D on the left, and F on the right of the Portico, mark'd A.

THE Room mark'd E, faceth a little Walk, which I propoſe ſituate South; the Portico A to the Weſt, and the other

ig. G

*page 208*

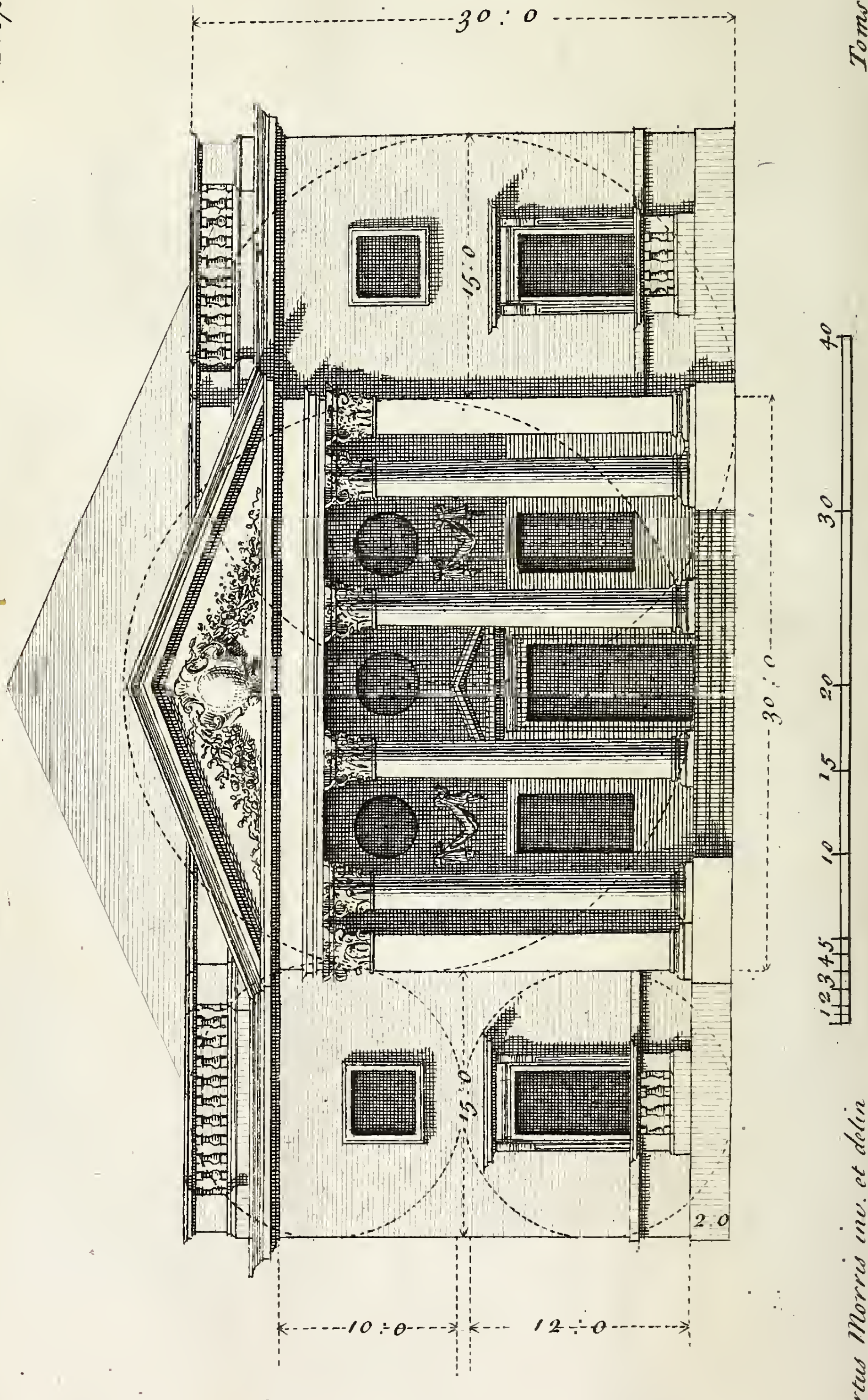
*Proport. 4.3 & 2.*


45 : 0
12 : 0
18 : 0
D
H
Cube 12 : 0
G
2 : 0
A
6 : 0
5 : 0
5 : 0
C
30 ft Cube
B
12 : 0
12 : 0
F
18 : 0
12 : 0
E
I

*obertus Morris inv: et delin.*

*Toms ſculp.*

page. 209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30 : 0
10 : 0
12 : 0
2 . 0
1 2 3 4 5
10
15
20
30
40

Proport. 4.3.&2

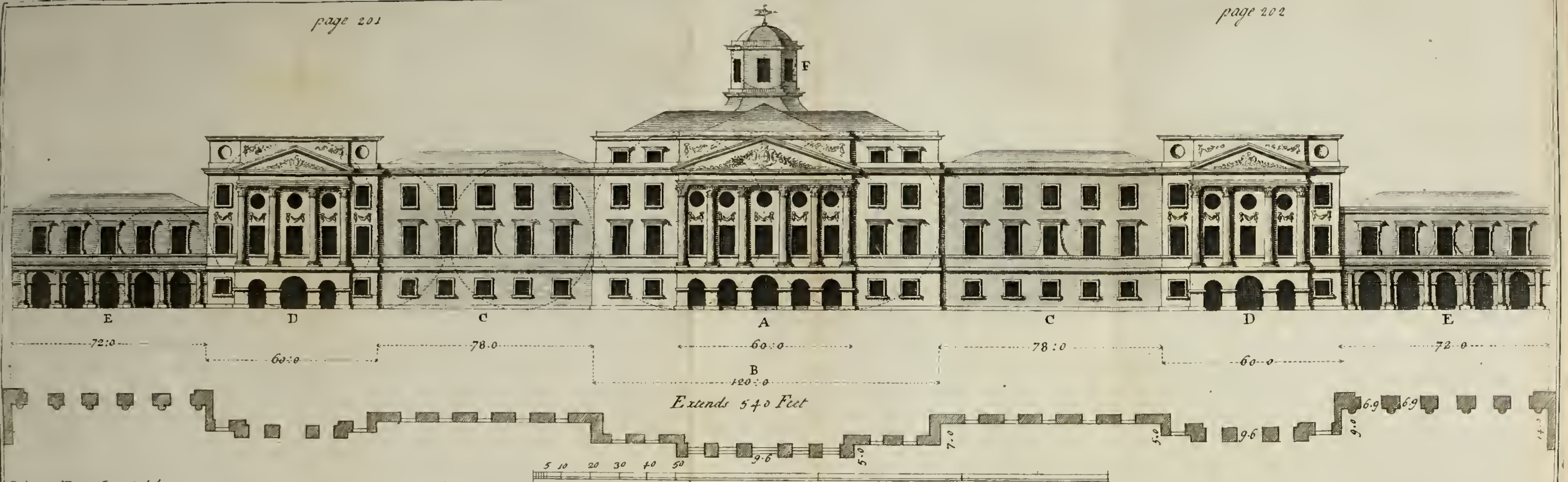
Fig. G

Toms sculp.

Robertus Morris inv. et delin

*page 201*

*page 202*


F
E
D
C
A
C
D
E
72:0
60:0
78.0
60:0
B
120:0
78:0
60:0
72:0
Extends 540 Feet
6.9
6.9
9.6
9.0
5.0
7.0
5.0
9.6
9.6
5 10 20 30 40 50 100 150 200

*Robertus Morris Inv. et del.*

*Toms ſculp*

other Portico to the Eaſt. From hence it may be obſerved, that if the Front of the Villa be a South Aſpect, this *Avenue* I propoſe at the Eaſt end of it, then the Portico A faceth the *Parterre* before the Houſe, which by giving that Walk an eaſy Deſcent to the *Parterre*, it would command

*—The more remoter Objects to its View:*
*Perhaps, the diſtant* Group *of woody Hills,*
*Or the more humble Verdure of the* Vale;
*The flow'ry Meadows, or the purling Stream,*
*And all the Beauties of a rural Scene.*

THE Room C, I propoſe to cove one fifth of its Height, then the circular Windows in the Portico come under the *Cornice*, which ſhould continue round the Room at the Foot of the Cove, and be of the *Corinthian* Order. The Rooms mark'd E and D are the Cube and half, and thoſe mark'd F and G Cubes of 12 ft. The two Staircaſes lead to the Attick Story, and the Top of the Building. The finiſhing of the internal Part I would propoſe to be in an elegant manner; the Rooms being regular, would admit of *Dreſs* and *Decoration* more advantageouſly than where that Niceneſs of *Symmetry* is not regarded by the Architect. The external Part I propoſe to be of Stone, and the covering of the *Roof* of ſuch Materials as would moſtly contribute to add Beauty to the Deſign. The Uſes of little *Fabricks* erected in the Gardens of ſome NOBLE *Patron* of Arts are many, as well as the additional *Beauty* it gives to a Spot of Ground diſpos'd in a *regular* and well compacted manner: where *Water* can be had eaſily, and by *Aqueducts* convey it from place to place, from one *Fountain* to another, and ſerve the Purpoſes which Gardens require for *Uſe* as well as *Beauty*, muſt render a Villa an endleſs *Delight* to the Inhabitants, a *Pleaſure* and *Felicity* which a contemplative Genius can be ſaid truly to poſſeſs.

TEMPLES, SEATS, GROTTO's, *&c.* the *Embelliſhment* and Decoration of *Gardens*, ſhould have a nice Affinity with NATURE.

*The ſilent* Groves *require a little Pile,*
*Not deck'd with Laviſhneſs, nor yet too grave,*
*The middle Path's the ſafeſt way to pleaſe.*
*Not ſo the* Op'ning *to ſome diſtant* View,
*The* Viſta, *or the* Pleaſure-Gardens *grace*;
*There let the Dreſs* Profuſeneſs *border on,*
*Be* wanton *like the Spot, with Flowers or Fruit,*

*To* fill *and* decorate *the proper Voids,*
*And* ſympathize *with* Nature *and the* Glebe.

*The murm'ring Streams, which* Grotto's *moſtly grace,*
*The* Moſs, *the* Shells, *the* Sea's *productive Store,*
*The* calcin'd Maſs *in* rude *Variety,*
*Require a Sameneſs to th' external Part :*
*The* Dorick *Pillar's maſſy Strength ſupply,*
*Its well* robuſted *Form, with* Ruſticks *mixt,*
*Cut by the ſkilful* Artiſt *into Shape.*
*The* frozen Iſicles *reſembled, form,*
*The* Sea-green Weed, *the* Plain *or Scallop'd Shell.*

*—Thus ev'ry Spot a various Shape aſſumes,*
*To* garniſh *or* diverſify *the Scene.*
*The lively* THIS, *in* THAT *the ſolemn* grave,
*Not much unlike the various* Scenes *of Life :*
*The Gaiety of* Youth'*s the lively Glebe,*
*The graver Spot's the* Verge *of Age and Death.*

*My Friends, — could* Cuſtom *be ſhook off that Yoke of Art,*
*Where blinded Fancy guides the ſickly* Eye,
Rules *and* directs *the vain, the weakly Mind,*
*And leads the wandring Thought from* Maze *to* Maze ;
*Could greater Genius's aſſert the* Right,
*The* Beauty, Uſe, Extent, *of* NATURE'S LAWS,

*Trace well the unerring* Rules *which ſhe directs*,
*And* glory *falſer* Cuſtom *to diſdain* ;

*Then might we hope the* myſtick Art *to find*,
*And* joy *in being* Patterns *to Mankind.*

As I am convinced that ſome of You have well conſidered the Neceſſity of adhering to RULES; I am at the ſame time perſuaded, many who have deſpiſed them will find an unerring TRUTH diffus'd through all its *Glare* of Beauty, and will (I doubt not) be as ſtrenuous to aſſert the Pleaſures which are the Reſult of practiſing them, as I do, who am, with all due Reſpect,

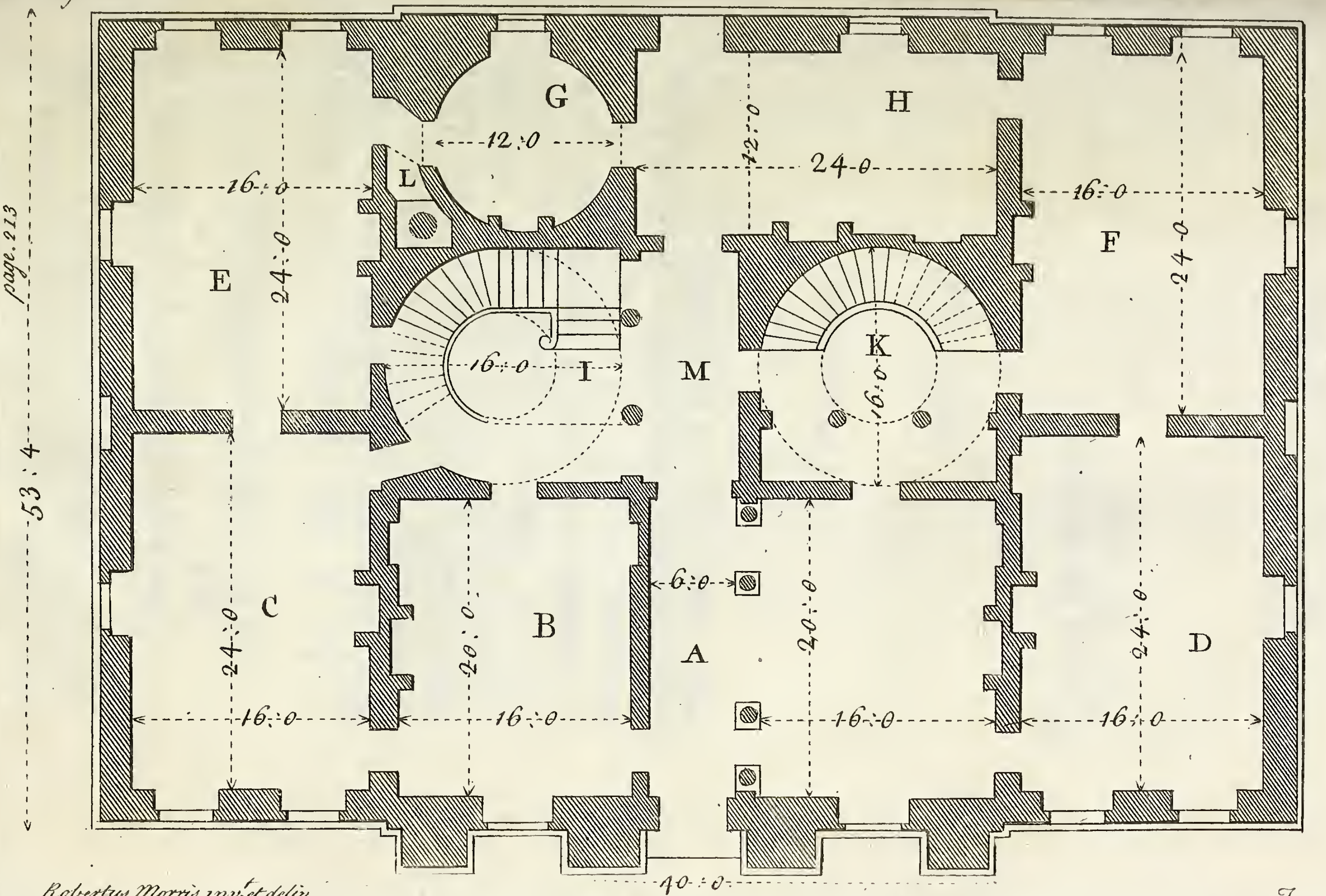
GENTLEMEN,

*Yours*, &c.

Read to the Society,
Dec. 16, 1734.

Fig. E.

page. 213


53 : 4
G
12 : 0
H
12 : 0
24-0
L
16 : 0
16 : 0
E
24 : 0
F
24-0
16 : 0
I
M
K
16 : 0
6 : 0
C
24 : 0
B
20 : 0
A
20 : 0
24 : 0
D
16 : 0
16 : 0
16 : 0
16 : 0
40 : 0

Robertus Morris inv.t et delin

Toms sculp.t

# LECTURE

## The FOURTEENTH.

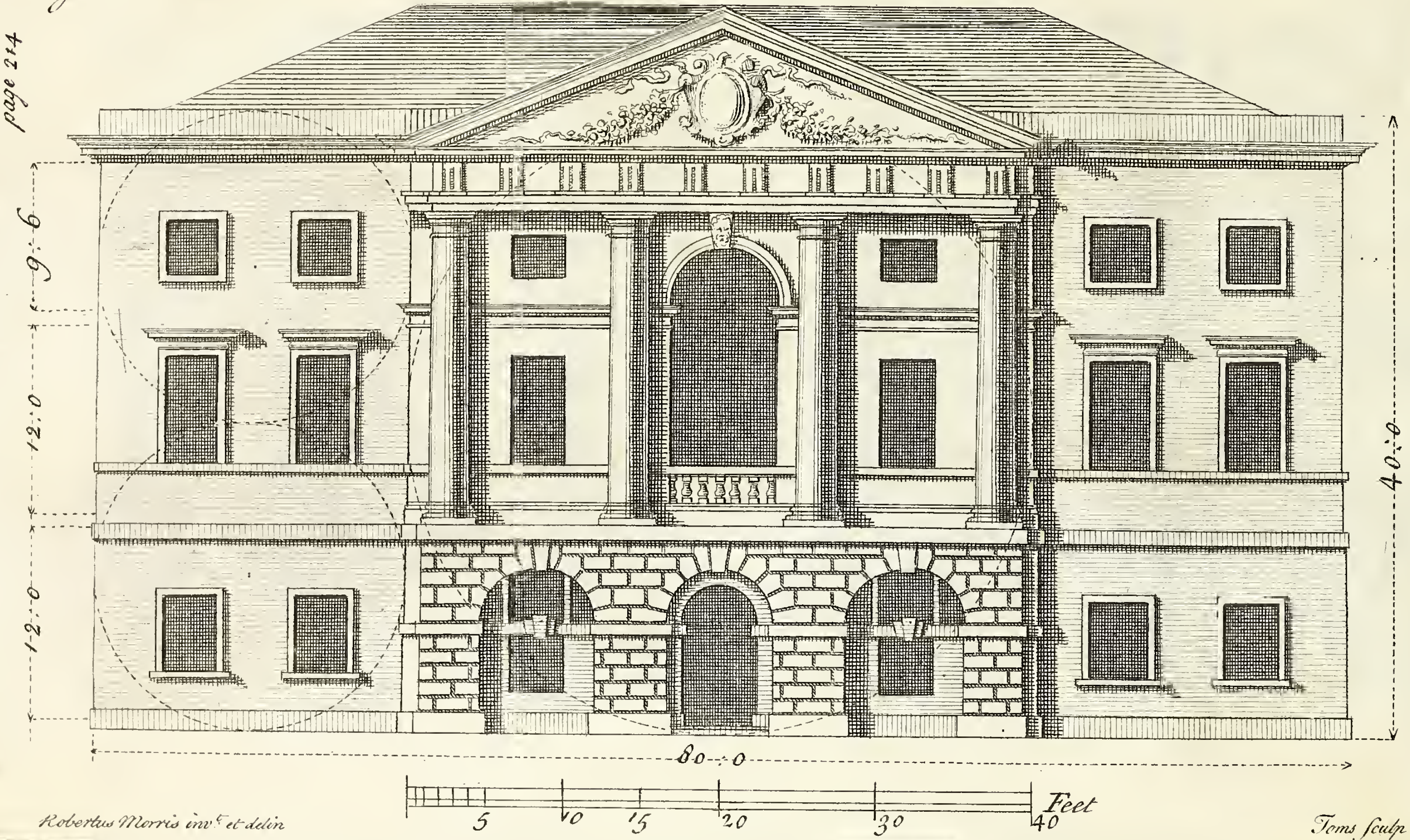
---

MY Five preceding *Lectures* of this *Second Part*, have been on Examples of the *Proportions* which I have laid down in the Firſt; in this I have delineated a *Plan* and *Profile* of each. They conſiſt of the CUBE, page the 139; the CUBE and half, Page the 155; the DOUBLE CUBE, Page the 169; the Proportion 3, 2, and 1, Page the 188, the Proportion 4, 3, and 2, Page the 208. The Proportion 5, 4, and 3, is in the firſt Part, pag. 124. There remains now only the Example before us, which is Fig. I. which is the Proportion 6, 4, and 3, to compleat the Title I at firſt affixed to theſe Lectures, of which I have been ſo ſtrictly obſervant, that your *ſerious* peruſal of them will convince you what Care I have taken to preſerve the Rules I have all along *recommended* to you for your Choice in the Compoſition of *Deſigning*, whether acceptable to the World, I am uncertain. However it be, if there are no more Blemiſhes than the *Novelty* of thoſe Rules to prevent their progreſs, I have happily ſucceeded in the Task I had voluntarily undertaken for your Amuſement. SITUATION has likewiſe been conſider'd as a neceſſary Branch of Architecture, for the skilful Deſigner to appropriate thoſe Proportions to ſuitable and proper Uſes. The laſt Deſign was fitted to a Sempervernal Spot, *this* before us is more aptly decorated to ſuſtain the corroding Quality of the Elements. The Length of the Front is 80 ft. the Depth 53 ft. 4 Inches, and the Height 40 ft. equal to the Proportion 6, 4, and 3.

THE Length of the Front I have divided into four equal Parts; the Height into two of thoſe 4 Parts. The middle Part breaks forward to receive the Order above, and conſiſts of two of thoſe four Parts in Breadth, and being equal in Height, becomes a Square, which is repreſented by the *dotted Circle* that is inſcrib'd within the Square; and the two Sides, conſiſting of one of thoſe Parts in Breadth, and two in Height, forms each a double Square; thoſe are like-

Fig I.

Proport 6. 4.& 3.


9 : 6
12 : 0
12 : 0
40 : 0
80 : 0
5
10
15
20
30
40
Feet

Robertus Morris inv.t et delin

Toms sculp.t

wiſe explain'd by the two inſcribed *Circles* on the Profile; the reſt of the Parts may be more particularly examin'd by the Scale thereto annexed. The Spot for Situation I propoſe ——

*By* Severn, Trent, *or* Thames'*s* ouzy *Side*,
*Where gliding* Floods *in circling* Eddies *play*
*Thro' flow'ry* Meads, *whoſe verdant* Banks *enfold*
*The* Silver *Surface of the limpid Stream*;
*The* Artiſt THERE *the firm Foundation lays*,
Graces *and* decorates *the proper Parts*,
*And nicely* garniſheth *the opening* Voids:
*The* Ruſtick Center *riſeth to ſupport*
*The gayer Beauties of the* Dorian *Mode.*

*To mingle* ART *with* NATURE'S *ſolemn Form*,
*Not far remote a ſteepy* ROCK *ſhould riſe*,
*Plac'd in the Center of a* large Canal.
*Around its* Baſe *and craggy Sides ſhould grow*,
*In* wild Diſorder, *various* Ever-greens;
*Blended with theſe, beſpangled Shells ſhould ſhine*,
Reflecting RAYS *to chear the weaken'd Eye*,
*By* Beams alternate *from the fluid* Wave.

*By nicer* Art, *upon the Summit's Top*,
*A little* Ruſtick, well-proportion'd *Pile*,

*By painful Steps the Curious ſhould aſcend ;*
*Th' Approach leſs* ſteep, *leſs* craggy *than the reſt.*

*Here, open to the Stream on ev'ry Side,*
*An* Engine's *Force ſhould raiſe the flowing Wave,*
*And round the Pile in thouſand Caverns play ;*
*By ſecret Pipes, diffus'd from* Shell *to* Shell,
*A* RESERVOIR *collects them as they fall:*
*Thence, in one* Torrent, CATARACTS *deſcend*
*With rapid Force, rebounding as they run*
*From Cliff to Cliff, to the diſorder'd Stream ;*
*From thence—in* bubbling Murmurs *die away.*

BESIDES theſe Embelliſhments of *Art* to *Situation*, *Nature* might find many Beauties to *grace* the Spot ; ſome diſtant *Hills*, or *Woods* on riſing Grounds, or elſe a more open Proſpect to the contiguous Country. As Seats thus ſituate have the Advantage of being eaſily ſupplied with *Proviſion*, and rendred leſs Expenſive by the Reaſonableneſs of their Conveyance, with generally a clear temperate Air, provided the Building be a little from the *River*, and on a riſing Ground ; this, by a large Amphitheatre, and eaſy *Slopes* of continued Verdure to the Edge of the River, would make it extreamly pleaſant for a Summer Retreat; for which purpoſe I would chooſe to have it as far from a *Town* as I could conveniently, or at leaſt from a *populous* one. Here might be enjoy'd all thoſe Pleaſures that *rural Retreats* can afford to the penſive ſtudious Mind; and few others can be ſaid truly to poſſeſs that inward Happineſs and Tranquillity.

THE Plan is of a Magnitude capacious for a middling Family's Reſidence, intending the *Offices* to lie on the back-part, and the common Entrance from thence to be at the Room marked H; the principal Entrance being deſign'd to be at the Garden Front, at the Room marked A. I have propoſed the Height of the Ground and Chamber-Stories each to be 12 ft. therefore, by dividing the Hall, or Entrance A, by a Screen of Columns, it is form'd into the Proportion of 5, 4, and 3, being 20 ft. long, 16 ft. broad, and 12 ft. high. The Room marked B is likewiſe the ſame Proportion. The Rooms marked C, D, E, F, are the Proportion 6, 4, and 3, the ſame as the external Part of the Building; the Length 24 feet, Breadth 16 feet, and Height 12 feet.

THE Room marked G, is a Circle 12 feet Diameter, and its Height 12 feet. And the Room marked H is a double Cube, being 24 ft. long, 12 ft. wide, and 12 ft. high; through which from the back Front to the Paſſage M, leads to two Stair-caſes which lie contiguous to each Apartment, and are 16 feet Diameter; they are ſeparated below by a Screen of *Columns* to that mark'd I, and by a Wall to that mark'd K, which I propoſe for common Uſe. On the Chamber Floor the Plan is continued after the ſame manner, the Stairs being open to a Gallery as a Communication to the Apartments and Back-ſtairs; they may finiſh in an *Octagon*, or *Circle*, and be illuminated at the Top by an *octangular* or circular Sky-light; the Stairs being with an open Newel 7 ft. 6 Inches in the Clear, for the more advantageous Reception of Light.

THE Chamber-floor ſhould be the *Principal*; and over the Rooms mark'd A, B, I propoſe to diſcontinue the Wall, and make one Room the Length of the Break, which is 40 ft. long; and by continuing it through the *Attick* Story, it will be 20 ft. high. The Wall between that and the Stair-caſes is to go through the *Attick* Story; ſo that Room will be, as below, 20 feet wide, which makes it a Double Cube, having no Room over it. In the *Attick* Story, over the Croſs-walls of the four principal Rooms, might Alcoves be made to each Room for the placing Beds, and a Communication from the Stair-caſes; and if required, on the Side oppoſite the Entrance, a private Way might be made to all the other Apartments, without paſſing the Stair-caſes, and they have a Paſſage each by a Door-way to the Stairs. On the Ground-floor a Situation like this might make the Place mark'd L, always free from being offenſive to the Houſe, if converted to a Water-cloſet by *Vents*, &c. convey'd in the Spandrils of the Stair-caſe.

THE Building I propoſe all of Stone; at leaſt, all the *Ruſticks*, *Columns*, *Entablature*, Strings, Dreſs, and other Ornaments, and the Parts to conſiſt of few Members, the fewer are leſs liable to Injuries, which Caſualty or Time may produce; the more plain and ſimple they are, beſt ſuit the *Dorick Order*: There is ſomething *grave* and *ſolemn* in this Order, with a *majeſtick maſculine*

Aſpect,

Aſpect, that renders it pleaſing and awful. I have choſe to omit Dreſs to the middle Part, to give the Columns a bolder RELIEVO, and to preſerve that Aſſemblage of *Dreſs* and *Proportion* which grace the Deſign.

I HAVE now by EXAMPLES ſhewn, that PROPORTION is abſolutely neceſſary in the performance of every Deſign, and Beauty is founded on it, and both are dependent upon the unerring Laws of Nature. *Dreſs* and *Decoration* are the next *Eſſentials* to HARMONY, and they are dependent upon *Situation*, and the joint *Union* and Concordance of the WHOLE aſſembled together *artfully*, is the Care of the judicious ARCHITECT: His proper Choice and juſt *Compoſure* makes every Deſign pleaſing to the Eye; and if the *Energy* of *Deſcription*, join'd with thoſe little Buildings in *Miniature*, are capable of giving you a juſt Idea of what Importance this Law of Nature, PROPORTION, is of, to grace and beautify the different Scenes of Situation, I imagine I have NOBLY aim'd: There the utmoſt of my Wiſhes extend, to do ſomething, that may not only be thought worthy notice, but *likewiſe* endeavouring to render thoſe few and SECRET

RULES, which were the Care of the Ancients to preſerve, even now practicable, and worthy Imitation.

FROM this manner of Deſigning flow all the Beauties of *Architecture.* The *Modus* may be ſhifted, extended, varied, decorated, diſpoſed, and *methodically* ranged into any *Form.* Theſe Proportions may be embelliſh'd, garniſh'd, and beautified with Enrichments to *Profuſeneſs*, or more diſcreetly tranſpoſed by Rules, juſt as the Taſte and Genius of the Architect is directed ; all ariſing from that one unerring Rule PROPORTION. The fine *Features*, the well-turn'd Arm *alone*, did not compoſe the fine VENUS; it was the joint Concurrence of the ſeparate Parts, whoſe juſt PROPORTIONS finiſh'd the *inimitable* Piece. ——

PROPORTION! *when I name that* pleaſing *Word*,
*In ſilent contemplative Raptures loſt*,
*All* NATURE *ſeems to ſtart, and ſay*, 'Tis here.
*The humbleſt* Shrub *our Admiration craves*,
*Its Form and Growth* proportion'd *to its Strength.*
*Th'aſpiring* CEDAR, *or the ſturdy* OAK,
*By juſt* Proportions *riſing in their Growth*,
*Held by* proportion'd *Fibres in the Earth*,
*To* bind, ſuſtain, *and* nouriſh *as they ſhoot.*

*The crawling Ant's* proportion'd *to its Uſe*;
*The Legs and Parts are fitted to ſuſtain,*
*Direct, and guide it, when it ſeeks for Food,*
*And Power* proportion'd *to convey it home.*
*The* Dog, *the* Horſe, *the* Elephant, *have all*
*Their Parts* proportion'd, *each to proper Uſe:*
*The* finny Element, *the* feather'd Brood,
*In thouſand diff'rent* Forms *and* Shapes *appear*
PROPORTION'D, *as their diff'rent Magnitudes*
*For Uſe, or diff'rent Nutriment, as each*
*Provide, receive, or well* digeſt *their Food.*

*Laſt made in the Creation,* finiſh'd Piece!
*That juſt* proportion'd, NOBLE *Being*, MAN!
*How apt each Part is fitted to its End,*
*All nicely ſerving each to proper Uſe,*
*In* beauteous Form, *and in* PROPORTION *juſt!*

*Mark how the* Orbits, *equal pois'd above,*
*In juſt* PROPORTION *ſtarted at a Word,*
*Keep ſtill their Courſe in their* alloted *Sphere,*
*Nor fly* diverging *from their proper Orbs,*
*But ſwiftly move in their amazing Paths,*
*By Powers attractive or expulſive held,*
Self-balanc'd by PROPORTION'D *Magnitudes*,
(TREMENDOUS THOUGHT!) *their long eternal Round.*

*The* ancient Grecian DEITIES *derive*
*From* human *Paſſions all their boaſted Fame.*
*From Strength* (Vain Power!) *that Hero* MARS *was nam'd*;
*And* Beauty, Venus's *Deity proclaim'd*;
*Yet* Strength *and* Beauty *fade and die away*,
*While* JUST PROPORTION never *can decay.*
THIS greater Power *will* endleſs Ages *run*,
*For ever* blooming, *and for ever* young.

GENTLEMEN, As the Subject of theſe *Lectures* have been a *Deſcription* and *Recommendation* of *Rules* to be applied to the Practice of Architecture, and that all *Rules* are founded on *natural* and *harmonick* Principles, PROPORTION has been that *one* neceſſary Branch on which thoſe Rules are eſtabliſhed; and what I have ſaid already on that Head, as an Inducement to your acceptance for practiſe, is ſufficient.

SITUATION, however *fictitious* or *romantick* I may have deſcribed it, falls immediately among the *firſt Claſs* of the *innocent* and *felicitous* Enjoyments of human Life: What a vaſt Inſight is it capable of giving to a ſpeculative Mind, in the *Contrivance* and *Wiſdom* of PROVIDENCE! What innumerable Subjects for Meditation, are different Scenes capable of furniſhing the Imagination with! *Compaſſion* and *Humanity* are rais'd by the Calmneſs and Tranquillity of the Spot; and the more turbulent Paſſions of the Soul, which the Rigours of the *Elements excite*, are ſoftned into a Serenity inexpreſſible.

ARCHITECTURE is that *great extenſive* Art that is capable of furniſhing the Mind with a multitude of pleaſing *Themes:* It is not confin'd in a narrow Orb, nor limited to one ſpot of the Earth; the *frigid* or *torrid Zone* may have the ſame *general Rules* appropriated to each; the Glebe in the greateſt *Profuſion* and *Luxuriancy*, in its full *Verdure* and *Fragrancy*, has ſet Limits to the Fancy of the Architect, as well as the moſt wild and irregular; the wanton Streams, which form themſelves into a thouſand little Meanders, have the ſame Proportions to direct the *Architect* in his choice of Deſign, as the *diſorder'd* Borders of the Ocean, or near the *Rocks* and *Precipices* of hideous unpaſſable Cliffs.

THE few who have treated on this Subject have wholly conceal'd this Branch of the *Art*, *Situation*, how to apply, decorate, or proportion the Deſign; their Aim has been more to perplex the Underſtanding of the Reader with difficult and intricate Rules for the far leſs important parts of Architecture, by *different Diviſions* of Parts and *Members* of no Signification in the *grand Branch* of that Art, DESIGNING; ſo that the *great* and *valuable* Parts of it are neglected to be ſearch'd into, and by ſuch *Intricacies* they meet with in the Entrance, are hinder'd in the further purſuit of their Studies.

I HAVE now gone through ſuch Remarks and Obſervations as I thought might be uſeful in the Courſe of theſe *Lectures*, omitting nothing which might be conducive to the Inſtruction of others, as well as the *Revival* of an *Art*, the *Name* only much the preſent Eſteem of the Age. I ſhall therefore conclude with an Obſervation I have met with to this Purpoſe. The Author tells you, "the
" *Egyptians* in their *Hieroglyphicks*, ex-
" preſs'd a Man that confin'd his Know-
" ledge or Diſcoveries altogether *with-*

" *in* himſelf, by the Figure of a *Dark-*
" *Lanthorn* encloſed round, which, tho'
" *illuminated* within, afforded no Ad-
" vantage of *Light* to thoſe about it."
For my part, as I ſhall communicate to the *Publick* whatever Diſcoveries I may *hereafter* further happen to make, I ſhould much rather be compar'd to an ordinary *Lamp*, that *waſtes* and *conſumes* itſelf for every Paſſenger's Uſe. I remain in the mean time, with due Reſpect,

GENTLEMEN,

*Your humble Servant*, &c.

*Read to the Society*
Jan. 13. 1734,5.

*FINIS.*

NUNQUAM PRÆPONENS

*Sir John Duntze*

BAR$^{T}$

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